Selwyn District Council

DRAFT
30 Year Infrastructure Strategy

2021 - 2051

Quality Record Sheet

Selwyn District Council
30 Year Infrastructure Strategy
2021 - 2051

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1.0 NARRATIVE / SUMMARY

The Selwyn Context 2021-2051

This is Selwyn District Council's third Infrastructure Strategy, and is an integral part of the long term planning process. It sets out a long term (thirty year) view about the services Council provides and how they will be provided in the future. This is the view through the telescope while the LTP itself is a close up of the next ten years. We know things will change, but this helps us plan a course for the future.

The outcomes sought by the community and the Selwyn lifestyle are central to the Infrastructure strategy. How does the infrastructure support our cultural, economic, environmental and social wellbeing? What decisions will need to be taken along the way to keep heading in the right direction?

Rapid growth continues to be the headline issue for Selwyn District. Looking out thirty years the district's population is expected to be around 120,000 residents. At close to 45,000 residents, Rolleston may be the fifth largest urban area in the South Island.

Leading and responding to growth is Council's priority. We don't want to lose our identity and our lifestyle. Ensuring there are sufficient services to meet our needs requires careful decision making. The Selwyn Growth model helps us forecast what the future population will be and when addition capacity is needed.

Selwyn takes a strategy-led approach to planning. This means issues are worked through with the community to determine what future direction is chosen and then we use processes like the Long Term Plan and this Infrastructure Strategy to progress the actions required. There are many choices to be made and these are part of developing a strategy.

Selwyn District Council acknowledges there are a number of partners involved in this planning process and delivering for the community. A strong relationship with Ngāi Tahu Whanui represented by Papatipu Rūnanga and Te Rūnanga o Ngāi Tahu. Council has established open lines of communication and meets regularly with Ngā Rūnanga to discuss planning, management and specific issues such as Te Waihora.

As the area becomes more urbanised, the relationship with Christchurch City grows. The Greater Christchurch Partnership involving Christchurch City Council, Selwyn District and Waimakariri District is about working together to achieve the best result for all. This means joined-up planning for initiatives that cross local authority boundaries.

This infrastructure strategy is being written in a time of significant uncertainty. There is significant change in the legislative and regulatory framework, and we are faced with the challenges of Climate Change and COVID-19 recovery. Signals indicate growth will continue as residents seek what Selwyn has to offer.

The right infrastructure at the right time will ensure Selwyn remains a great place to live, work and play.

What are the main themes?

- *Understand why Selwyn is growing and what the differences (advantages) are*
- *Recognise growth and plan for it*
- *Strategic planning is vital to understand demands*
- *Acknowledge there are trigger points for change, including critical mass*
- *Climate change*
- *Actively engaging with Māori in the decision-making process*
- *Infrastructure and community resilience*

How do we manage our infrastructure assets?

- ✓ *We operate assets to provide a service*
- ✓ *We maintain the assets to keep them in good working order*
- ✓ *We renew assets when that are no longer fit for purpose*
- ✓ *We upgrade assets or add new ones to improve the level of service or increase capacity (to meet growth)*

Key issues →

Key issue	5 Waters	Transportation (Roads and Footpaths)	Liveability/ Community Facilities	Solid Waste Management
Rapid Growth and demographic change	Water supply: Increasing demand due to growth Sourcing adequate water supply for the future *Water quality and security should be our top priority (Te Mana o Te Wai)* Wastewater: Increasing demand due to growth	Increasing traffic with growth Changes to vehicles in future Affordability in maintaining the network Public transport improvements and mass rapid transit on the horizon Investment in footpaths – wider and smoother to suit aging population	Future community expectations	
Changing Government Priorities and Legislative Environment	Water Supply: What level of treatment is required, to chlorinate or not? Protection of water resources aligns with our top priority - Water quality and security (Te Mana o Te Wai) Environmental standards Service delivery structure likely to change (water reform) Stormwater and Land Drainage Managing flood risk; climate change effects Protection of water resources aligns with our top priority - Water quality and security (Te Mana o Te Wai) Increasingly strict environmental standards Greater responsibility for stormwater consents What is Council's future role in Te Waihora – will it be greater and what will be involved (action and costs)	In terms of PT and MRT we need to have nimble and adaptable solutions not locked into hard infrastructure that doesn't suit in the future	Governance and management structures	
Climate Change	What do we expect and what changes need to be made?			
Environmental Impacts, sustainability and Compliance requirements	Protection of water resources aligns with our top priority - Water quality and security (Te Mana o Te Wai) Stormwater & Wastewater Increasingly strict environmental standards & consenting challenges Wastewater Future options for Upper Selwyn Huts, Ellesmere, Darfield The role of water races & land drainage and future options		Governance and management structures	
Infrastructure Resilience	Centralise or dispersed facilities?	*Investment in maintenance needs to keep up with issues in parts of the district*		
Impacts of COVID-19	COVID-19 may affect economic activity and rate of growth			

Response

<table>
<tr><th>5 Waters</th><th>Transportation (Roads and Footpaths)</th><th>Liveability/ Community Facilities</th><th>Solid Waste Management</th></tr>
<tr><td>Water supply:
Ensure sources are reliable and protected
Where water scarcity is an issue, manage population growth and development of land
Manage demand through water wise programmes and water charging structure</td><td rowspan="2">Integrate planning with Greater Christchurch partners

Promote alternative modes of transport (walking & cycling)

Progress safety initiatives and programmes

Monitor asset condition and model long term management approach</td><td rowspan="2">Expand and build new facilities to align with overall demand and the type of demand</td><td rowspan="2">Increase opportunities for reduce, reuse and recycling to manage demand</td></tr>
<tr><td>Wastewater:
Consider centralised options, increase treatment capacity ‘just in time’
Wastewater disposal options must consider future development and growth patterns (and growth must be managed near wastewater facilities to avoid reverse sensitivity effects)</td></tr>
<tr><td>Water Supply:
Continue to invest proactively in water source protection, treatment and monitoring, working in partnership with the new regulator
Manage demand through water wise programmes, water charging and management of land development
Engage in water reform process, to allow Council to plan proactively for service delivery changes</td><td rowspan="3">Reflect national and regional priorities and ensure these fit the Selwyn context.

Prioritise actions based on Selwyn’s community outcomes</td><td rowspan="3"></td><td rowspan="3">Increase opportunities for reduce, reuse and recycling</td></tr>
<tr><td>Stormwater and Land Drainage
Ensure that planning decisions are underpinned by science and engineering advice regarding flood risk & climate change
Continue to encourage green stormwater solutions & retrofit treatment into the network
Review the governance of land drainage and address long-term environmental sustainability of this service
Consider requiring higher standards of stormwater treatment and attenuation on private development sites, to protect Council’s stormwater network and discharge quality</td></tr>
<tr><td>Engage with Ngā Rūnanga regarding Te Waihora management and progress water quality initiatives</td></tr>
<tr><td colspan="4">Commission scientific assessment of climate change impacts on Council infrastructure. Use this work as the basis for Council policy for infrastructure adaptation and emissions mitigation, as identified in Activity Management Plans</td></tr>
<tr><td>Water demand management & leakage reduction
Combine schemes where source changes are required</td><td rowspan="3"></td><td rowspan="3">Continue to improve compliance and consent condition monitoring processes to ensure required environmental outcomes are achieved</td><td rowspan="3">Increase opportunities for reduce, reuse and recycling</td></tr>
<tr><td>Continue to encourage sustainable stormwater solutions & retrofit treatment into the network where identified in management plans and monitoring programs
Consider requiring higher standards of stormwater treatment and attenuation on private development sites, to protect Council’s stormwater network and discharge quality
Improve wastewater treatment processes and combine schemes where this is the best option</td></tr>
<tr><td>Continue to consult with community over the future options for water races & land drainage– consider all wellbeings</td></tr>
<tr><td>Continue to use masterplans and hydraulic modelling as tools for assessing scheme resilience, and for testing the merits of distribution vs. augmentation across the district
Increase resilience through climate change adaptation where relevant</td><td>Increase resilience through climate change adaptation</td><td></td><td></td></tr>
<tr><td colspan="4">Monitor district activity and adapt programmes to suit.</td></tr>
</table>

Key Decisions for Council and the Community

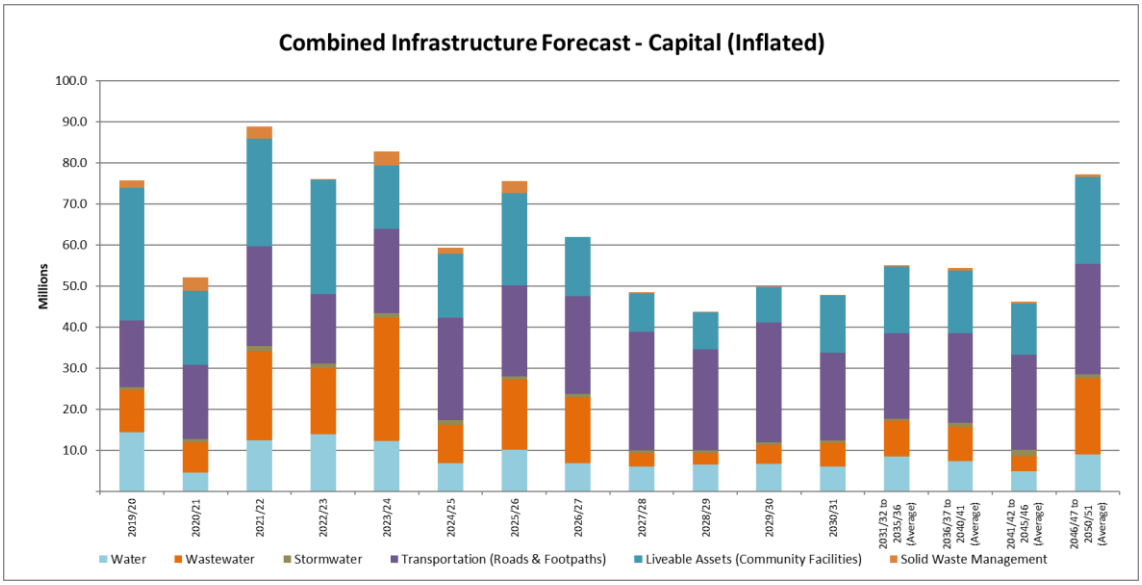
<table>
<tr><th>Key issue</th><th>5 Waters</th><th>Transportation (Roads and Footpaths)</th><th>Liveability/ Community Facilities</th></tr>
<tr><td rowspan="2">Rapid Growth and demographic change</td><td rowspan="2">Water Supply :
Water quality and safety - what level is treatment is required, or palatable by the community; will we have the choice?
Do we understand the impact of nitrates on source water and the treatment required for human and stock use? Will the new regulator accept any alternatives to chlorination?</td><td>What level of Road Maintenance is required, and what is affordable?
What options are there for service delivery?
How should funding be allocated across the network?</td><td rowspan="2">What mix of community facilities will serve the population best?
– centralised and specialised, or distributed
What types of spaces and facilities are needed?
How many do we need, and where should they be?
Is there a need to retire some older halls that are no longer fit-for-purpose and not well-used by communities</td></tr>
<tr><td>Passenger transport
Within the Greater Christchurch partnership, what services are appropriate and when?
What can be done to encourage 'higher' densities near transport hubs to encourage usage</td></tr>
<tr><td rowspan="3">Environmental Impacts, sustainability and Compliance requirements</td><td>Wastewater Centralisation:
Would it be best to combine wastewater treatment in one location, when environmental and cost factors are considered?
What are the options for wastewater servicing for Darfield and Kirwee?
Is treatment to a higher level to allow for reuse (e.g. for parks irrigation) viable?</td><td rowspan="3"></td><td rowspan="3"></td></tr>
<tr><td>Stormwater and Land Drainage
What changes are required to the governance or infrastructure for land drainage, to meet new environmental standards?
Greater responsibility for stormwater consents - how can Council manage their risk and maintain discharge quality?
What level of treatment is desirable/will be required?</td></tr>
<tr><td>Water Races
What is their future – social and environment benefit? Perhaps as a biodiversity corridor?</td></tr>
<tr><td>Infrastructure Resilience</td><td colspan="3">Future renewals
Selwyn is fortunate that much of its infrastructure is new. But in thirty years' time we will be facing the start of a future renewals bow wave. When do we need to plan for this in earnest?</td></tr>
</table>

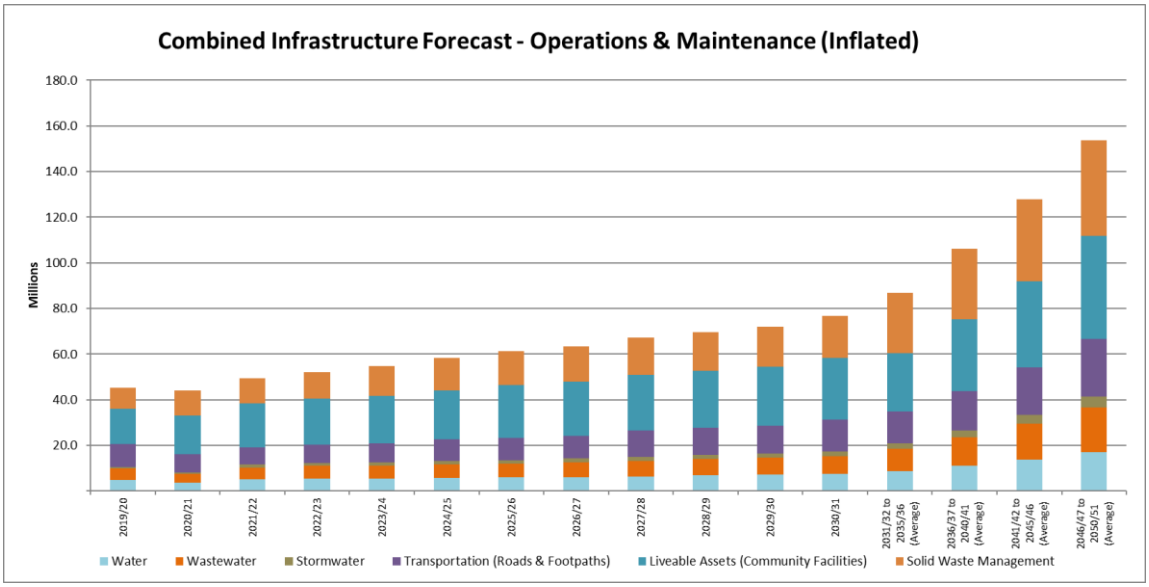
What don't we know?

The greatest risk with forward planning is locking in actions that may not be the best choice.

Many of the investments proposed over the next thirty years are about improving the lives of residents and visitors as well and addressing the impacts of growth. The growth model is our best estimate, and we aim to upgrade infrastructure just in time to meet demand. Service levels are tracked to ensure we are delivering services to a standard agreed with the community and long term planning processes are revisited every three years. There is data we need to help us make better decisions and this is a priority action.

Summary Forecasts





2.0 SELWYN DISTRICT

2.1 Background

The Selwyn District continues to be a great place to live, work and play. Selwyn is among the fastest growing areas in New Zealand in terms of population and GDP growth.

New residents continue to move into the district to enjoy the lifestyle; which is an attractive combination of affordable housing, excellent facilities and a relaxed rural identity.

The district includes a wide range of environments from coastal Lake Ellesmere (Te Waihora) to the Southern Alps at Arthurs Pass. Productive plains and rolling hills contrast with the bush and tussock country.

The entire Selwyn District lies within the rohe (area) of Ngāi Tahu. Ngāi Tahu Whanui is Tangata Whenua within the rohe of Ngāi Tahu. Ngāi Tahu Whanui represented by Papatipu Rūnanga and Te Rūnanga o Ngāi Tahu, comprises people of Ngāi Tahu, Ngati Mamoe and Whaitaha descent and holds customary tribal authority over an area that includes the entire Selwyn District. Council has established open lines of communication and meets regularly with Ngā Rūnanga to discuss planning, management and specific issues such as Te Waihora.

Growth continues across the district and includes many sectors:

- Agricultural
- Commercial
- Education
- Health
- Hospitality
- Industrial (including manufacturing and support services)
- Residential
- Transport (road, rail, port linkages)

The impacts of COVID-19 have been less severe than other districts, and activity has remained strong. Demand for residential property remains high and the District Plan Review is leading greater integration of activity.

Over the next thirty years the district is projected to grow to some 120,000 residents from 70,000 currently. The majority of the population will be urban, with the greatest concentration in Rolleston which will grow from around 20,000 to some 45,000 residents.

The challenges of such rapid growth are considerable. Council is committed to a strategy-led approach to ensure the values sought by the community are retained, and the long term vision is kept in mind.

Selwyn District does not operate as an island. Council is actively involved in joint planning and initiatives with Christchurch City, Waimakariri District and the Canterbury Region generally.

Selwyn District Council is committed to providing the services needed in building vibrant and sustainable communities within the district. The role of Rolleston as a hub in the centre of the district, closely linked to Christchurch city, will increase over the years ahead. Over the last few years Rolleston has transformed into a more self-contained township, with more commercial

activity and schools supporting the residents. This will continue as the town likely grows beyond the size of neighbouring provincial centres such as Ashburton and Timaru.

The Rolleston Masterplan focuses on developing a town centre and a main street as the heart of Rolleston, attracting people to shop and work in the town and to provide new facilities and public places for people to enjoy. The plan includes the development of a new library, community and technology centre and town square. The Foster Recreation Park Masterplan outlines the development of the park as a significant sport and recreation facility.

Alongside local challenges, the district is affected by national priorities. Affordable housing is a key aspect in which Selwyn District is a leader. Development of transportation systems with a focus on safety and mode shift is a national priority. Selwyn is able to integrate these priorities into new developments and is progressively working to improve the network elsewhere.

The changing environment is driving community attitude and national policy. Climate change and decarbonising the economy are factors which feed into this strategy. Improving water quality is reflected in Council's response to national policy statements.

Water reform is a major issue for Selwyn District Council. With a responsibility for a large number of schemes - which range from small communities to centralised systems in Rolleston - Council is committed to ensure the best outcome is achieved for the community. The planned approach is to continue developing programmes that meet the needs of the community and be well-prepared for the changes ahead.

While ten years have passed since the Canterbury earthquakes, Council remains cognisant of natural hazards and its contribution to building resilient communities. As new infrastructure is built and aging infrastructure is renewed, an opportunity to improve infrastructure resilience exists and should be maximised.

A bright future within a context of rapid growth depends heavily on the provision of service delivery from sound infrastructure. The capital works associated with the rapid growth is significant. Council has considered the costs and effects of delaying or promoting projects. The costs of rapid growth are very real and implementing programmes of works will be the priority for Council alongside maintaining existing services. In 2018 Council agreed the focus for the next ten years was on establishing priority infrastructure. This is mostly driven by increasing population growth, both upgrading existing systems and establishing facilities that a growing community expects.

This is the third Infrastructure Strategy prepared by Council and should be read as a companion document to the financial strategy.

The document has a thirty-year horizon and considers

- the issues affecting infrastructure
- the response to these issues
- the actions and expenditure involved with operations, maintenance, asset renewal and capital works.

2.2 Some Key Facts

Asset Type	Asset Description	Replacement Value
 Community Facilities	Community Facilities	$300m
 Transportation	2,600 km urban and rural network.	$829m
 Water Supply	30 schemes	$184m
 Wastewater	14 schemes	$311m
 Stormwater	22 schemes	$70m
 Water Races & Land Drainage	WR -10 schemes: Open Drains LD - 3 schemes: Open channels and controls	$163m
 Solid Waste Management	Resource Recovery Centre	$2m

3.0 INFRASTRUCTURE STRATEGY INTRODUCTION

3.1 Overview

This is Selwyn District Council's third Infrastructure Strategy. It has been prepared from Council's 2021 suite of Activity Management Plans alongside the Long Term Plan of which it forms part.

The issues discussed reflect the current legislative environment and the communities' priorities across the district/city.

The financial forecasts are estimates and the reliability of the forecasts decreases beyond ten years and towards the thirty year planning horizon.

Introduction

Selwyn District Council is required to prepare an Infrastructure Strategy, setting out key issues and decisions the Council anticipates over the next 30 years and the proposed priorities for its infrastructure programme.

Our continued and forecast population and business growth requires investment in infrastructure to support the delivery of services. While this is reflected in the strategy, through a focus on growth-related projects, it also emphasises the need to maintain and renew the existing asset base. The programme outlined in the strategy represents a 'just in time' approach, with many projects working in combination to provide an efficient and effective approach.

The strategy includes estimates of operational and capital costs which have been derived from the asset management planning process. The financial forecasts are estimates, and the reliability of the forecasts decreases beyond 10 years and towards the thirty year planning horizon.

Selwyn District Council has a comprehensive approach to Strategic Planning. This has been a huge advantage in the progress of the district and ability to adapt to change.

There have been many discussions about the future Selwyn residents seek, and a range of documents describe the visions, objectives, actions, and rules established.

As the Infrastructure Strategy for the 2021-31 Long Term Plan looks out the next thirty years, Council staff have taken the opportunity to look ahead.

A planning session "Selwyn 2050" challenged staff to look out to the end of the planning horizon. Issues discussed included:

- Population, demographic and ethnic changes
- Disruptive technology – especially transportation
- Housing – style and preference
- The Selwyn lifestyle advantage
- Affordability
- The environment
- Climate Change
- Central and Local Government

These issues all have an effect on the services Council provides to residents and visitors.

It was agreed that lifestyle decisions attracted new residents and kept people in the district. Land development and urbanisation has followed a uniform pattern of residential housing with adequate family space and outdoor living. At this stage, there is no apparent demand for higher density dwellings in any of the district's communities. Densities should be expected to increase in the future, particularly in the proximity of transport systems such as mass rapid transit. 'High density' for Selwyn will differ from high density in central Christchurch or metropolitan areas generally.

Selwyn has numerous advantages for development suited to buyers and there are less restrictions on residential expansion compared to other areas.

Priorities for the Council 2021-2051

The rapid growth in the district, particularly eastern Selwyn, is the immediate challenge facing the Council, and all indications are that this will continue. The impacts are spread across roading, 5 waters, community facilities and solid waste. Understanding these impacts and developing 'fit for purpose' responses into a comprehensive programme is Council's priority.

To ensure Selwyn is an attractive and affordable district, infrastructure must meet the needs of residents across the district at a basic level, with changes made where required. Along with growth-driven change, improvements to water supplies and other utilities to meet community expectations and legislation are vital.

The Council has developed long term strategies for communities across the district; including Malvern and Ellesmere. Implementing the initiatives discussed with these communities is also an ongoing process.

The themes that underpin the Infrastructure Strategy are:

Understand why Selwyn is growing and what the differences (advantages) are

- *A district where most of the population is urban, but have a rural lifestyle at heart.*
- *Residents choose Selwyn because of the lifestyle – not a city lifestyle*.

Recognise growth and plan for it

- *Communicate with and engage the community, so they understand where we are going and why we plan the way we do.*

Strategic planning is vital to understand demands

- *Enables Council to influence and control growth, supporting efficient and effective provision of infrastructure which delivers on the community's service level expectations. Council needs to look well ahead at issues like centralised wastewater treatment and disposal to avoid less than optimal solutions.*

Acknowledge there are trigger points for change, including critical mass

- *Ensure our planning identifies the trigger points from growth and development, with many projects working in combination.*

Climate change

- *There will be changes and we should take a sustainable approach to infrastructure provision.*

Actively engaging with Māori in the decision-making process

- *Building on the relationship and striving for a better future together.*

Infrastructure and community resilience

- *Ensuring the risks that could impact the community are identified and addressed.*
- *Resilient infrastructure is key to economic and social sustainability.*

Impacts on Planning and Service Delivery

While demand for services continues to grow, it is fair to expect some change to the delivery of the core services over the next thirty years.

Robust planning is vital to support the responses to the anticipated scenarios, and understanding the changes that may occur.

Progressive change is expected in some areas, such as improvement to freshwater through directives in policy statements, standards, plans and regulations. This will impact wastewater and stormwater treatment and management undertaken by Council.

In some situations, we expect change to be progressive to a point. Understanding and planning around trigger points is a theme that has been identified. Planning needs to be appropriate to maintain fit-for-purpose services to a trigger point - as well as for after that point.

As an indication, the following items have been identified across infrastructure activities.

Activity	**Issues**
Transportation	Increasing traffic with growth Changes to vehicles in future Affordability in maintaining the network Public transport improvements and mass rapid transit on the horizon
Water Supply	Increasing demand and demand management Sourcing to meet demands (quality and quantity) in the future Governance and management structures
Wastewater – Collection, treatment and disposal	Scheme distribution/augmentation across the district Environmental standards
Stormwater and Land Drainage	Managing flood risk (consider climate change storm intensity) Environmental standards
Water Races	The role of water races and future options
Waste Management	Future community expectations Governance and management structures
Community Facilities	Community expectations and cost-effective provision Changing demographics and interest will change demand Rationalisation of services and structures

3.2 Strategy Layout

The Strategy document sections and corresponding LGA Act sections are tabled below:

Table 3.1: Strategy Layout

Strategy Section		LGA 2002 (Section 101B)
1	Executive Summary	
2	Identifies the purpose of the Infrastructure Strategy and the core infrastructure included in this strategy	2(a) and 6
3	Describe the district~~/city~~ and illustrate the linkage between strategic documents	2(a)
4	Describe the core infrastructure, its condition and performance while recording the significant assumptions, risks and mitigation	2, 3(e), 4 (c) & (d)
5	Discuss the emerging issues that will impact on the core infrastructure assets	3 (b) to 3(e)
6	Discuss Council's response to the emerging issues and the significant decisions to be made during the term of this strategy	2(b), 4(b)
7	Identifies the response options for the significant issues and documents the benefits, outcomes, timings and funding sources	2(b); 3(a) to (e) & 4(a) to (c)
8	Identifies the costs associated with the actions proposed	4(a)

3.3 Purpose

Section 101B – Infrastructure Strategy states:

(1) A local authority must, as part of its long-term plan, prepare and adopt an infrastructure strategy for a period of at least 30 consecutive financial years.

The stated purpose of the Infrastructure Strategy is to;

a) Identify significant infrastructure issues for the local authority over the period covered by the strategy; and
b) Identify the principal options for managing those issues and the implications of those options.

Section (6) defines infrastructure assets as including:

a) existing or proposed assets to be used to provide services by or on behalf of the local authority in relation to the following groups of activities:
    i. water supply:
    ii. sewerage and the treatment and disposal of sewage:
    iii. stormwater drainage:
    iv. flood protection and control works:
    v. the provision of roads and footpaths; and
b) any other assets that the local authority, in its discretion, wishes to include in the strategy.

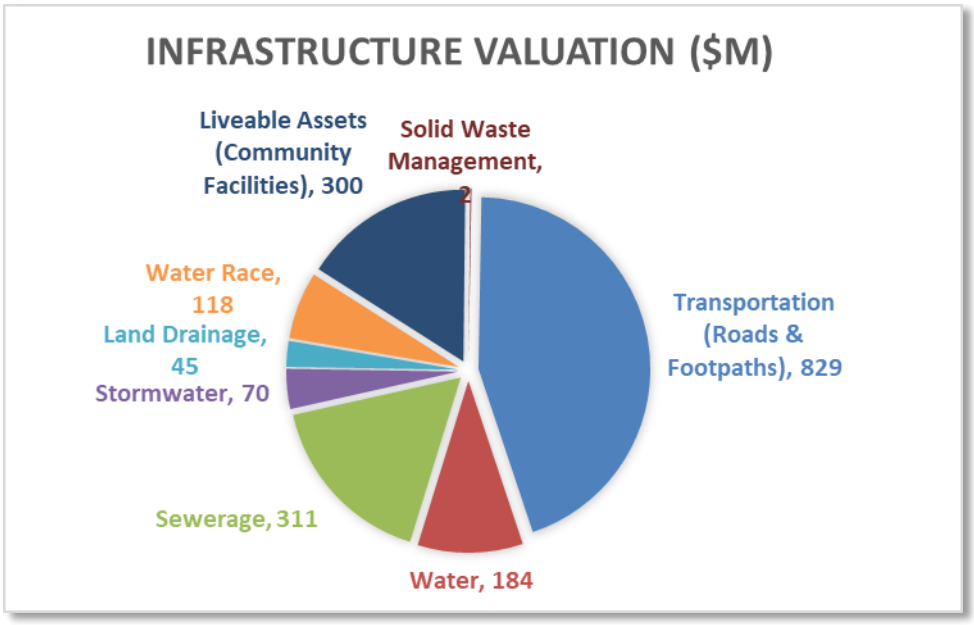
3.4 Selwyn District Core Infrastructure Assets

3.4.1 Core Activities

The core Selwyn District Infrastructure Assets are tabled with 2019/2020 replacement values below:

Table 3.2: Selwyn District Infrastructure Assets

Asset	Description	Replacement Value ($M)	% of total
Water Supplies (urban and rural)	27 schemes: Water abstraction, treatment and distribution	$184	10%
Sewerage	14 schemes: Wastewater collection, treatment and discharge	$311	17%
Stormwater	22 schemes: Stormwater collection and discharge	$70	4%
Transportation (Roads and Footpaths)	2,600 km urban and rural network. Roads (arterial, collectors, local) curbs and gutters Bridges footpaths	$829	45%
Land Drainage	*10 schemes: Open Drains*	*$45*	*2%*
Water Races	*3 schemes: Open channels and controls*	*$118*	*6%*
Liveability Assets	*Community Facilities improvements, not land*	*$300*	*16%*
Solid Waste Management	*Resource Recovery Centre*	*$2*	*0.1%*
TOTAL		**$1,859**	



3.4.2 Other Activities

Council has elected to include Community Facilities and Waste Management in this Infrastructure Strategy. While not required by the Local Government Act 2002, the Community Facilities activity is regarded as significant enough to be included and provides a more complete view of the infrastructure management issues ahead. There are some significant community facility capital projects being considered within the 30 years horizon. Excluding these from the strategy would provide a distorted view of the programme ahead.

Waste Management is an essential service and while the infrastructural asset base is smaller, the service is part of what is regarded as core infrastructure for Council.

Land Drainage and Water Races are an integral part of the 5 Waters activity. Both activities are undergoing a period of change, so it is appropriate to include reference to them in the strategy.

3.5 Infrastructure Achievements

While projects attract the greatest attention the important of operations, maintenance and renewals should not be overlooked. Ongoing service delivery is vital to community wellbeing and programmes have been successful in doing this.

Key to responding to growth the District Plan Review has progressed to align land use planning and infrastructure planning

The following details improvements achieved over the last three - six years:

3.5.1 Water

- Continuing rollout of water meters on properties connected to Council water supplies
- Water supply improvements are helping to provide higher quality water for our growing population.
- New ultraviolet (UV) treatment and, in some schemes, filtration systems were installed at numerous schemes
- New water supply bores drilled at several schemes
- The Council completed a comprehensive risk assessment of water supplies across the district,

3.5.2 Sewerage

- Capacity upgrades to the Eastern Selwyn Sewerage Scheme (ESSS) at the Pines Wastewater Treatment Plant included a new bio-reactor and upgrades to the sludge solar drying hall and effluent UV treatment system.

3.5.3 Stormwater

- Stormwater upgrade work has continued in Leeston, with development of stage two of a stormwater bypass designed to divert water away from the town centre when heavy rain occurs.

3.5.4 Transportation (Roads & Footpaths)

- Walking and cycling strategy – new routes established
- Footpath extensions
- Replacement of streetlights with LEDs
- Intersection upgrades including several sets of traffic lights
- Safety improvements at schools
- New road licks for schools, community facilities and town centres

- Upgrades of connections to Christchurch Southern Motorway
- Safety and flow improvement around SH1 and rail lines

3.5.5 Water Races

- Consultation over future options

3.5.6 Liveability Assets

- New community facilities - Dunsandel, West Melton, Lakeside, Weedons and Tai Tapu.
- Seismic strengthening of community facilities
- Development of Foster Park, including the new Selwyn Sports Centre complex
- Selwyn library/community space consultation and subsequent construction (Te Ara Ātea)
- Rolleston Council offices extended and park-and-ride facility constructed next to the Council offices.
- Construction progressing on Selwyn Aquatic Centre extension and the Selwyn Health Hub
- New community parks with youth activities at Lincoln and West Melton
- Increased and upgraded the public toilets network (11 new facilities)

3.5.7 Solid Waste Management

- New recycling stations established at Arthur's Pass and Hill
- Comprehensive solid waste management regime for more than 23,000 Selwyn households
- Ongoing decrease in the total amount of residual waste per head of population

3.5.8 Infrastructure Performance

Services provided by Selwyn District Council have been established over many years, with significant additions to the networks created over the past decade of rapid growth.

In general, the assets perform well and levels of service are met. This continuation of fit-for-purpose service levels will continue, provided there are timely upgrades to meet the demands of a growing population.

Council's forward works programmes will continue to deliver services to meet community expectations, and improve assets where required. System performance is monitored through a combination of non-financial performance measures, community surveys and technical measures.

3.5.9 Risks to Asset Performance

Council had identified the main risks that would affect the performance of the infrastructural assets through the AMPs for each activity. These are summarised below.

Risk	Activities Affected	Risk Level
Growth (overall and demographic change)	All The capacity of the infrastructure to provide adequate service for a growing population	High
Change in Legislation	All The service standards required and ability to fund activities can change at any time	High
Funding challenges	All, particularly Transportation (Roads and Footpaths) Timely provision of infrastructure is reliant on approved funding from Council sources, partners including Waka Kotahi NZTA and developers	High
'Levels of Service creep'	All As the population grows and there is a greater proportion of 'urban' residents, service levels expectations increase	Moderate
Climate Change	Predominantly 5 Waters services Sea level rise and more extreme weather patterns placing additional pressures on service resilience	Moderate
Adverse/catastrophic events	All A significant event such as earthquake, significant snow, winds/storms or pandemic causes damage, disruption and changes the priority of Council	High

Mitigation measure associated with these risks are detailed in each AMP.

4.0 SELWYN DISTRICT COUNCIL PLANNING FRAMEWORK

4.1 Selwyn District Council Establishment

Selwyn District is named after the Selwyn River (Waikirikiri), which, in turn, is named after Bishop Selwyn, one of the first Europeans to walk through the area in the mid-1840s. The district's current boundaries date from 1989 when three adjacent counties (Malvern, Ellesmere and the rural half of Paparua) were fused into a single district. A generation earlier, in 1963, Ellesmere had absorbed a neighbouring fourth county, Springs. These counties had once been part of a larger Selwyn County.

The district covers an extensive area, from Arthurs Pass through to Lake Ellesmere/Te Waihora. A long-established farming heritage is spread across the plains.

From 1989 administration was split between offices in Darfield and Leeston; and in 2007 a central headquarters was established in Rolleston.

The Council is innovative and proactive, involved in commercial activities and is often recognised as a national leader in planning and community based activities.

Selwyn District Council Office in Rolleston

4.2 Strategic Context

The Strategy aims to give effect to Council's vision and strategic direction.

Selwyn 2031 Vision

"To grow and consolidate Selwyn District as one of the most liveable, attractive and prosperous places in New Zealand for residents, businesses and visitors."

Selwyn 2031 Strategic Directions

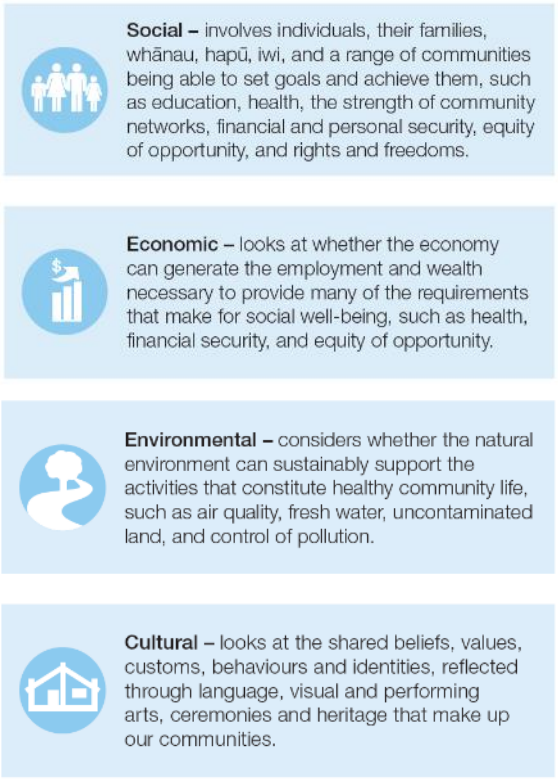
To achieve this vision, Selwyn 2031 identifies the following five high-level Directions to guide Council's future decision-making:

- *A More Sustainable Urban Growth Pattern;*
- *A Prosperous Community;*
- *A Great Place to Live;*
- *A Strong and Resilient Community;*
- *Sustainably Managing our Rural and Natural Resources.*

4.2.1 Community Outcomes and Wellbeing

Council has a broad responsibility for the wellbeing of the community. Wellbeing for Selwyn District has been refined into a set of community actions, which Council focuses its activities towards and bases its decision making on.

These are shown below, and further discussion on development and monitoring is provided in the Long Term Plan.



Key community outcomes			Relevant Core Council activity
Environment	A clean environment	Air, land, water and general environment to be kept in a healthy condition	Wastewater Services Solid Waste Management
	A district with a rural identity	A living environment where the rural identity of Selwyn is maintained	
Social	A healthy community	We have appropriate health, social and community services & they are accessible to all residents of the district	Community Facilities Transportation
		We provide water, wastewater and drainage services necessary to support community and public health services	Water Services
		We have access to an effective and efficient refuse service	Solid Waste Management
	A safe place in which to live, work and play	We are safe at home and in the community	
		We have access to, and participate in, community life	
		We maintain a coordinated and effective response to, and recovery from, emergency and disaster events	
		Pedestrians, cyclists and motor vehicle users can safely move around Selwyn District	Transportation
	An educated community	Our District provides a range of quality, lifelong education and training opportunities	Community Facilities
Economic	A prosperous community	Selwyn has a strong economy which fits within and complements the environmental, social and cultural environment of the district	
	An accessible district	We have an effective and accessible transport system	Transportation
Cultural	A community which values its culture and heritage	Our District provides a range of arts and cultural experiences and facilities. Local history and heritage is preserved, shared and promoted.	All

4.3 Linkage with Other Documents

4.3.1 Strategic and Infrastructure Planning

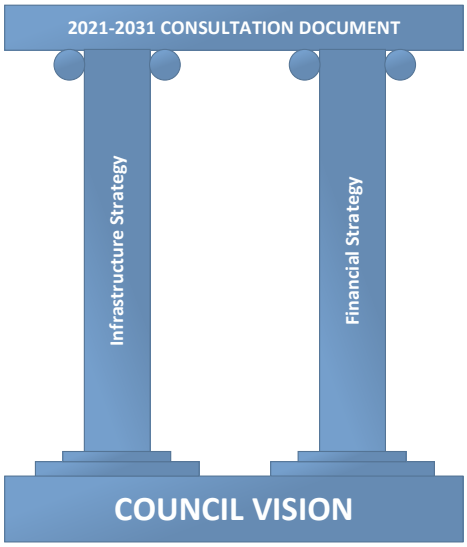
Infrastructure Planning is a key component of Council's planning regime which includes financial planning, land use planning and strategic planning. The Infrastructure Strategy and Financial Strategy underpin the Long Term Plan. For details about the first ten years, the Long Term Plan should be consulted.

Land use planning provides for develop to occur in a sustainable manner, with form appropriate to the district. The District Plan review is well advanced and some change can be expected as this becomes fully operative and further reviews/plan changes proceed.

Financial planning centres around several policies and the Financial Strategy which is a companion to this document.

The Infrastructure Strategy and Financial Strategy form the pillars that support the Consultation Document.

The following diagram illustrates the key linkages for this infrastructure strategy, utilising the asset management systems approach discussed in ISO 55000.



Council's Significance and Engagement Policy

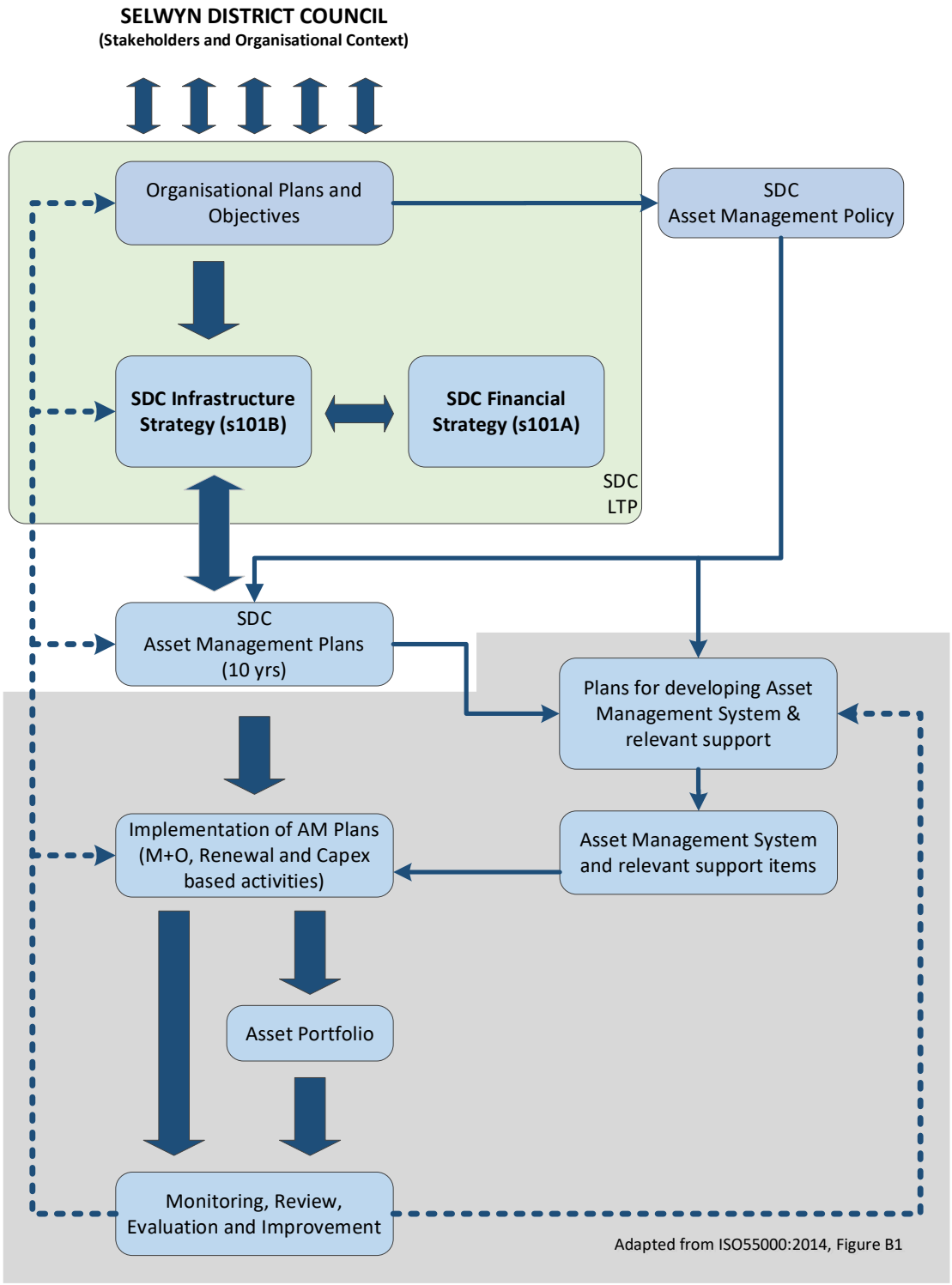
Engagement is a process of relationships and dialogue between decision-makers, partners, communities and stakeholders for the purpose of making better decisions, policies or programmes. Public input into significant decisions, policies or programmes undertaken by Selwyn District Council is essential to ensure they reflect the aspirations and priorities of communities, Ngāi Tahu and interested groups throughout the Selwyn district and wider Canterbury region.

The Significance and Engagement Policy aims to enable a flexible but focused approach to engagement that:

- recognises the importance of involving Selwyn's diverse communities in the Council's work
- provides a range of options and methods for engagement with different groups and communities and for issues, decisions and proposals with different degrees of significance
- demonstrates our commitment to building and maintaining ongoing constructive relationships with Selwyn communities and developing greater understanding of community views and preferences.

This Infrastructure Strategy is part of the Long Term Plan suite of documents that is available to the community.

Figure 4.1: Infrastructure Strategy- Linkages with other Documents



Involvement of Māori in decision making

While the Local Government Act 2002 sets out provisions relating to all Māori, it is recognized that within the Canterbury region, Ngāi Tahu are the tangata whenua. They have a special status in terms of the Council's resource management activities, and are not just another interest group. Selwyn District Council has previously adopted a policy on Development of Māori Capacity to contribute to the Council's Decision Making Processes, to assist the Council in meeting its obligations under Section 81 of the Act.

In Te Wai Pounamu (the South Island) one tribe, Ngāi Tahu occupies all but the most northern part of the island. The entire Selwyn District lies within the rohe (area) of Ngāi Tahu. Ngāi Tahu Whanui is Tangata Whenua within the rohe of Ngāi Tahu. Ngāi Tahu Whanui represented by Papatipu Rūnanga and Te Rūnanga o Ngāi Tahu, comprises people of Ngāi Tahu, Ngati Mamoe and Whaitaha descent and holds customary tribal authority over an area that includes the entire Selwyn District. Descendants of Ngāi Tūāhuriri and Te Taumutu have resided in the area now known as Selwyn District for over 40 generations. This rich Ngāi Tahu history and tribal authority is underpinned by spiritual and whakapapa connections, occupation, land, resource use and management thereof. The territorial area governed by Selwyn District Council sits within the takiwā (territory) of Te Taumutu Rūnanga and Ngāi Tūāhuriri which are two of 18 Ngāi Tahu regional papatipu rūnanga, constituted under the Te Rūnanga o Ngāi Tahu Act 1996 to represent mana whenua interests.

Financial Strategy

The financial strategy guides the way the Council makes decisions over revenue, expenditure, borrowing and investments. It helps explain how it plans to balance the books and summarises the implications of these plans for ratepayers. In doing so it links the decisions the Council makes on what services to provide and how they will be paid for.

Infrastructure Strategy & AMPs

The Activity Management Plans (AMPs) developed for each activity are detailed analysis of issues and actions proposed to ensure appropriate levels of service are provided to the community. These are the base information for the Infrastructure Strategy. Council has established a level of Asset Management Policy to ensure AMPs developed are fit for purpose in the Selwyn context.

Procurement Strategy

Council has a procurement strategy endorsed in November 2019 by NZTA for Transportation activities. Council took the opportunity to develop the Strategy to cover all infrastructure activities through discussing options for procurement and the reasons for these approaches.

Council owns SICON as a Council Controlled organisation. For non-transportation activities Council has agreed to utilise SICION where the company has appropriate capacity and capability.

4.4 Consultation information

The Long Term Plan and Activity Management Plans are living documents. While published in line with statutory timeframes, they are kept continuously updated and under review.

Accordingly, the issues raised through each Annual Plan and Long Term Plan process feeds into the understanding of community issues and priorities. Similarly, Levels of Service monitoring provide direction to where interventions are required.

For this Long Term Plan, Council undertook 'pre-consultation' on specific issues. This is summarised below.

Early Consultation

Undertaken by Research First, November 2020

Early community feedback informs Council decision-making on

- work priorities and
- funding strategies

In particular, direction was sought on:

- Council's level of service and investment
- Trade-offs
- Ratepayers' willingness to pay

Overall key findings

Importance of Selwyn retaining its distinct rural character

Most important Council's activities over the next decade were identified as:

1. Providing and maintaining safe and quality roads (social and economic wellbeings)
2. Providing and maintaining a clean and consistent water supply (environmental wellbeing)

The majority of respondents want the same level of Council spend and service on all except two areas (safe intersections and cycleways).

There is a willingness to pay more (e.g. rate increase or user charge) for some activities, but respondents also want Council to look for other funding sources (especially for roading-related activities)

Most-identified specific activities where Council should increase investment:

1. Safe intersections
2. Safe drinking water
3. Quality roads
4. Roading connections between townships
5. Providing facilities and services for teenagers

Focus on roads

Of the five roading-related activities, safe intersections ranked highest for more funding

Safe intersections	
Quality of roads	
Roading connections between townships	
Availability of cycleways	less
Footpaths in urban areas	less

For ‘safe intersections’, 40% of respondents were happy to pay more.

Focus on water

Slightly less desire for Council to invest in water-related activities than roading, but still high overall

Safe drinking water supply	
Wastewater (sewerage) system	
Urban stormwater network	
Land drainage network	less
Water races	less

For ‘safe drinking water’ 51% of respondents were happy to pay more.

Focus on community services and facilities

Of all the activities, desire to invest in community services and facilities-related activities was lowest

Facilities and services for teenagers	
Parks, sports fields, and playgrounds	
Local community centres and halls	less
Swimming pools	less
Libraries	less

For ‘Facilities and services for teenagers’ 37% of respondents were happy to pay more.

Focus on the four wellbeings

View of making positive progress:	Economic wellbeing (54%)
	Social wellbeing (52%)
View of making poor progress:	Environmental wellbeing (22%)
	Cultural wellbeing (15%)

The wellbeings where participants thought progress was poor is vital for Council to address. Initiatives will be progressed through the LTP in this regard.

Greater Christchurch 2050 survey results for Selwyn

Biggest challenges - in terms of greater Christchurch issues - were seen as being:

- Traffic congestion is getting worse (62%)
- There are pollution and waste management issues (58%)
- We are not doing enough to offset the impacts of climate change (48%)
- We are losing our natural ecosystems and indigenous biodiversity (45%)
- It’s costly and difficult to access health services (44%)

5.0 CORE INFRASTRUCTURE

5.1 Asset Description

Selwyn district's assets are split between older townships and the newer growth areas. The rural areas are also changing with irrigation and intensive farming. With rapid growth over the last twenty years Selwyn District's portfolio of assets is newer than many authorities. This means that the renewal challenge is pushed further-out beyond the 30 year horizon for growing communities, but will be more significant.

Community facilities now represent a sizable portion of Councils activities, so these are discussed in similar detail to other core infrastructure.

Service Life of Facilities and Networks
The service life of a network, asset or facility can be influenced by factors outside the actual expected lives of the individual assets. But in general, core infrastructure has no stated end of service life. The influences associated with the service life are:

- The role of Council in providing a continuous service indefinitely
- Resource consents: Major consents are usually 20 to 35 years but the infrastructure that are associated with these consents may have a different service life (e.g. wastewater treatment plant may have a life of 50 to 75 years);
- Receiving environment (social/culture).
- Demand for the service (e.g. sports facilities where particular sports may lose popularity and the facility become surplus).

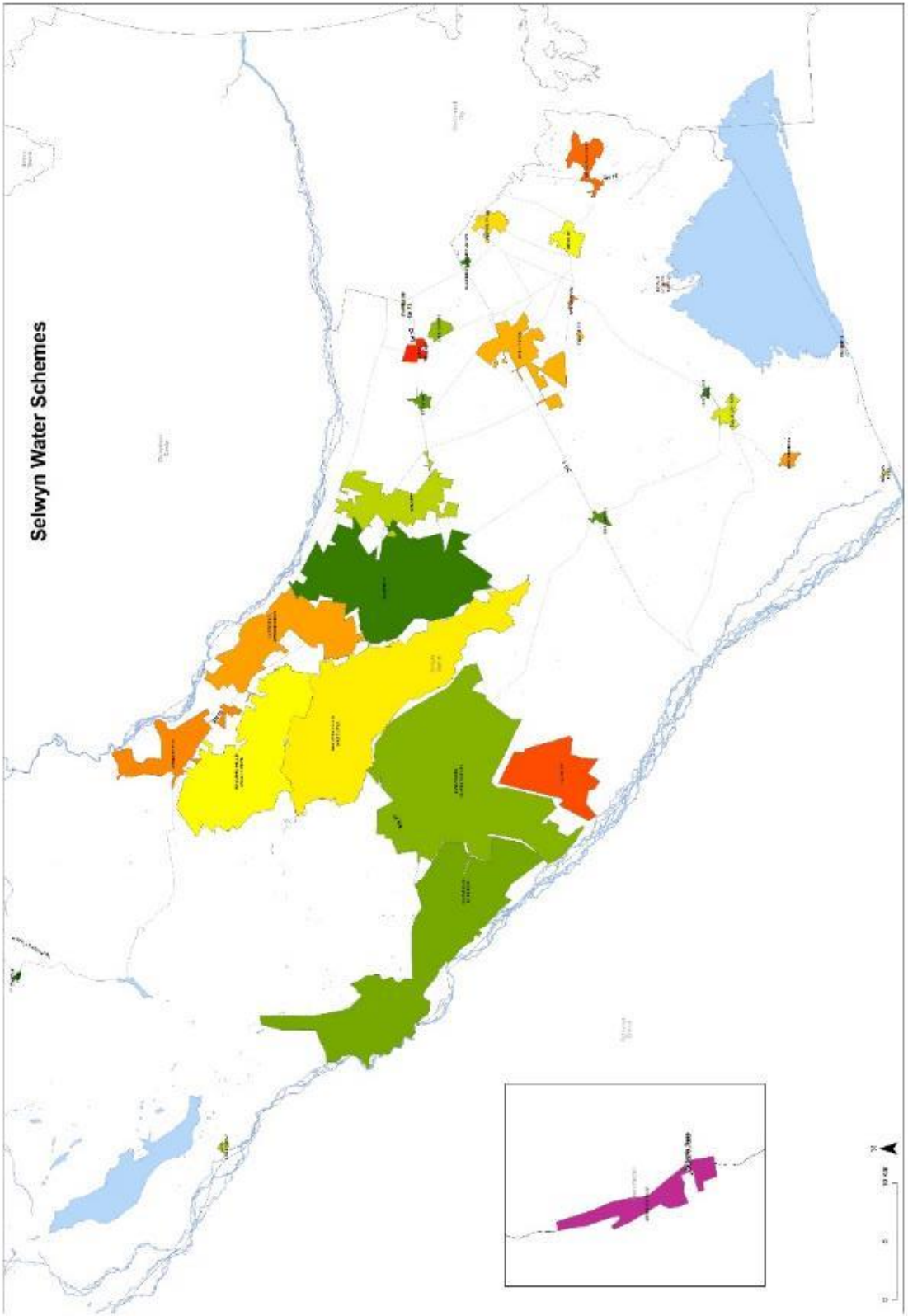
5.1.1 Water

Council manages 27 water supplies, located between the main divide - Arthurs Pass and Pacific coast – Taumutu. They supply water for public needs including household, gardens, and public reserves. The water supplies service 78% of residential properties within the district.

The sources of water for the schemes are surface water weir intakes, river galleries or deep groundwater bores. The level of treatment required differs depending on the quality of the source water.

All schemes have been upgraded over time to meet the requirements of the New Zealand Drinking Water Standards, and Water Safety Plans are in place for all schemes.

Demand has generally grown in line with population and industrial growth. This has put pressure on resource consent abstraction limits and network infrastructure.


Selwyn Water Schemes

Currently there are different levels and forms of water treatment across the district schemes as illustrated below.

Key

✓ Existing

Upgrade proposed

Scheme	Pop served	Source	Water Treatment Device		
			Filtration	UV	Chlorination
Arthur's Pass Water Supply	357	Gallery/River	✓	✓	✓
Castle Hill Water Supply	406	Gallery/River			✓
Claremont Water Supply	163	Deep Groundwater		✓	
Darfield Water Supply	3,846	Deep Groundwater			
Dunsandel Water Supply	511	Deep Groundwater		✓	
Hororata-Acheron Water - Glentunnel (Hororata)	920	Gallery/River	✓	✓	✓
- Acheron	240	Gallery/River			✓
Jowers Road Water Supply	53	Deep Groundwater			
Kirwee Water Supply	1,326	Deep Groundwater		✓	
Lake Coleridge Water Supply	172	Gallery/River	✓	✓	
Leeston/Doyleston Water Supply	3,057	Deep Groundwater		✓	
Lincoln Water Supply	7,442	Deep Groundwater			
Malvern Hills Rural Water - Hartleys	1,493	Gallery/River	✓	✓	✓
- Dalethorpe	191	Gallery/River	✓	✓	✓
Prebbleton Water Supply	4,655	Deep Groundwater			
Rakaia Huts Water Supply	331	Deep Groundwater	✓	✓	
Raven Drive Water Supply	35	Deep Groundwater		✓	
Rolleston Water Supply	19,198	Deep Groundwater		✓	
Sheffield/Waddington Water Supply	592	Gallery/River	✓	✓	✓
Southbridge Water Supply	1,027	Deep Groundwater		✓	
Springfield Water Supply	601	Gallery/River	✓	✓	✓
Springston Water Supply	549	Deep Groundwater		✓	
Tai Tapu/Otahuna Water Supply	615	Deep Groundwater		✓	
Taumutu Water Supply	25	Previously Deep Groundwater			
Te Pirita Water Supply	30	Deep Groundwater		✓	
Upper Selwyn Huts Water Supply	80	Previously Deep Groundwater		✓	✓
West Melton Water Supply	2,552	Deep Groundwater	✓	✓	

Water Supply Upgrades

The proposed budget provides for the continued upgrading of Council's water supplies to provide:

- a higher level of treatment
- provision for redundancy,
- security of supply,
- to meet increasingly stringent water safety plan requirements.

It is predicted that the security and quality of groundwater will gradually decline over the next ten year period. This is already been observed in places like West Melton and Rolleston. The budget also provides for significant funding of growth related upgrades to ensure the continued high level of service for our growing communities. A well staging exercise has been completed as part of Selwyn's water master planning. The development of any new sources will be funded by development contributions.

Chlorination of Supplies

As Council continues to work through the Water Safety Plan process, other water supply schemes may require either temporary or permanent chlorination. Council are seeking approval for the Rolleston water supply to be chlorine-free.

In late 2019, Council commissioned a report on Best Practice for Non-chlorinated Drinking Water Supplies. The key finding of this report was that the total cost of implementing all actions required for chlorine-free water is approximately $30 million. In addition there will be increased ongoing operational costs to maintain water supplies at this best practice level. Based on interim feedback from the new regulator (Taumata Arowai), it may be practically impossible to gain an exemption allowing water supplies to remain chlorine-free.

Although Selwyn District Council water supplies are in relatively good condition compared to other NZ schemes, further work would be required to meet international best practice for chlorine-free water, including:

- All water sources would need to be equipped with UV and other treatment methods (this work is nearing completion)
- Additional inline UV treatment may be required for untreated schemes with long reticulation lengths
- Borehead protection will be required for all groundwater sources (where not already in place)
- Implement a comprehensive leakage reduction programme, with established targets
- Improve water metering
- Address airborne contamination for borehead vents, air release valves and vents at reservoirs
- Install additional & advanced pressure monitoring within the network
- Further protect reservoirs from infiltration
- Monitor and enhance backflow prevention across the district
- Reduce pipe breakage rates
- Use a branched network layout for new installations
- Upskill contractors and improve public awareness
- Improve groundwater protection

Industry Benchmarking

Council participates in the Water New Zealand National Performance Review. In 2020, Selwyn District Council's average residential water charge for 200m^3/year was $327. This is lower than most of our neighbouring districts and the national average, as follows:

- Christchurch City Council $290 (note, this is a capital charge regime)
- Waimakariri District Council $388
- Ashburton District Council $417
- NZ national average $454

Council's volumetric charge of $0.50/m^3 is extremely low compared to other Councils around NZ.

5.1.2 Sewerage

The Council is responsible for 14 reticulated wastewater schemes that service 62% of properties within the district. Reticulated community systems have been provided where there are medium-large urban towns or sale of crown operations to Council required that a reticulated scheme be provided, for example Arthurs Pass and Lake Coleridge. There are 7 wastewater treatment plants, all of which dispose of treated wastewater to land.

The Eastern Selwyn Sewer Scheme serves the townships of Rolleston, Lincoln, Prebbleton, Springston, West Melton and Burnham Military Camp. Wastewater from these communities is treated at Pines wastewater treatment plant. The Ellesmere wastewater treatment plant serves Leeston, Doyleston and Southbridge.

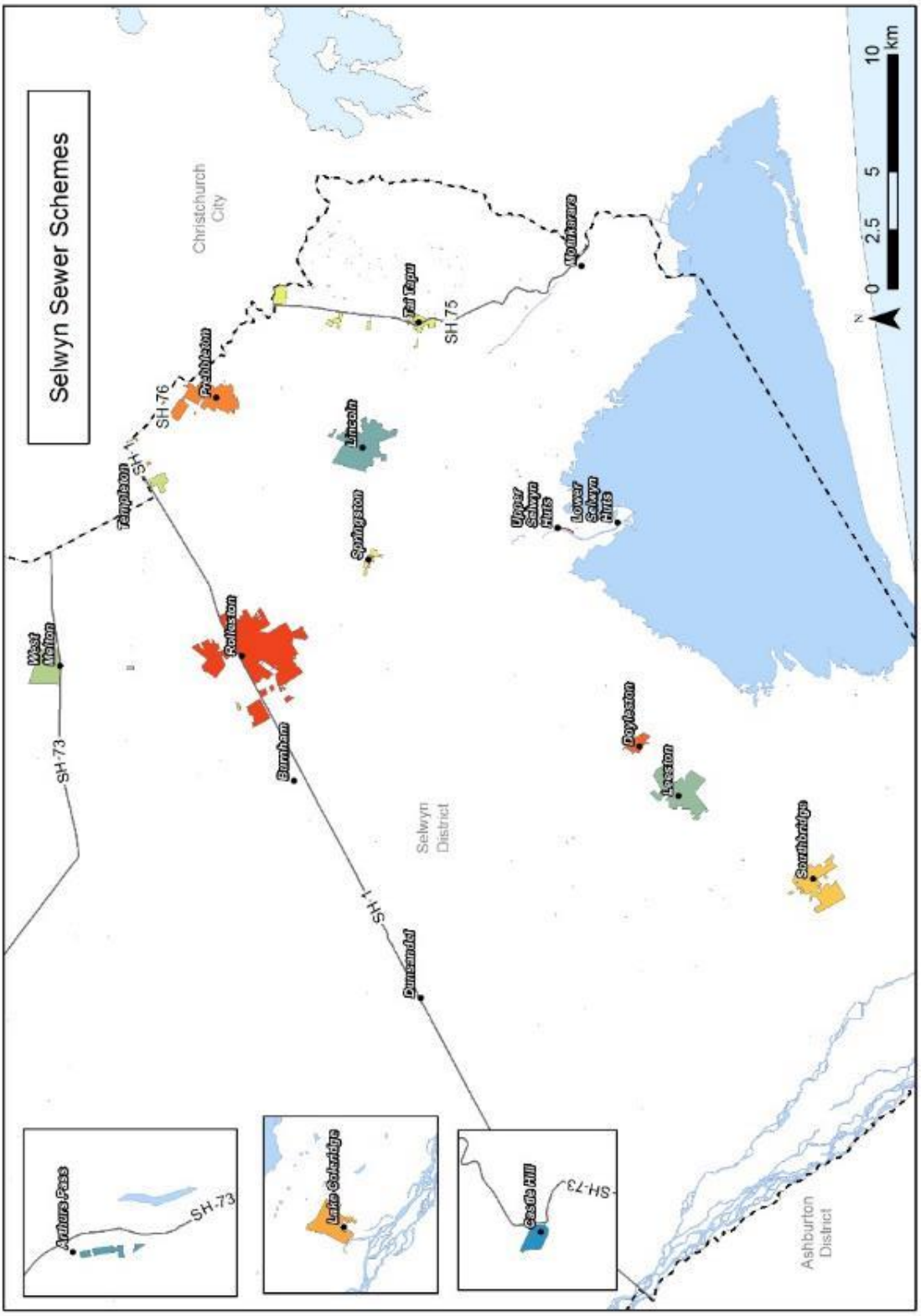
Wastewater from Tai Tapu township is pumped to Christchurch City reticulation, where it is combined with City Council wastewater and treated.

Eastern Selwyn Sewerage Scheme (ESSS)

The Pines WWTP has been designed to be modular, allowing the plant to be upgraded in stages to match population growth. The current Pines WWTP will have capacity to treat wastewater from 60,000 Population Equivalents (PE). A masterplan has been developed for the treatment plant to see what is required to expand the ultimate treatment capacity to 120,000 PE. In the 2021 – 2031 LTP, Council are proposing to connect the communities of Darfield and Kirwee to Pines WWTP.

Ellesmere Sewerage Scheme

The Ellesmere WWTP serves the communities of Leeston, Southbridge and Doyleston. These communities are forecast to experience moderate growth, with an additional 516 people expected in the catchment by 2031 (total population of 4,401 people in 2031). In the 2021 – 2031 LTP, Council are proposing to connect the Ellesmere WWTP to Pines WWTP.


Selwyn Sewer Schemes
Christchurch City
Selwyn District
Ashburton District
Prebbleton
Lincoln
Springston
Rolleston
Templeton
West Melton
Burnham
Dunsandel
Leeston
Doyleston
Southbridge
Upper Selwyn Huts
Lower Selwyn Huts
Te Pirita
Motukarara
SH 75
SH 76
SH 1
SH 73
Arthurs Pass
Lake Coleridge
Castle Hill
0 2.5 5 10 km
N

5.1.3 Stormwater

Council manages 22 stormwater management areas within the Selwyn District. These areas are all urban in nature and have infrastructure in place to collect, convey and dispose of surface water. Many areas also manage stormwater in terms of water quality and quantity.

The use of low impact urban design including swales and natural treatment methods are becoming more common. A protocol has been established to ensure there is integration between Roading, Stormwater and Parks management.

5.1.4 Land Drainage

Council manages 10 land drainage schemes covering 22,472 hectares within the Selwyn. These schemes are in place to drain groundwater (primary function) and convey stormwater (secondary function). One scheme is specifically for the purpose of flood protection, Bealey River stopbanks/flood water diversion, and another is for willow control on a section of waterway along the Hororata River. The remaining nine schemes are primarily land drainage.

Council manages and maintains nine classified Land Drainage schemes with the support of local land drainage committees:

- Osbornes Drain Land Drainage scheme,
- Greenpark Land Drainage scheme,
- L2 Land Drainage scheme,
- Ellesmere Land Drainage scheme,
- Leeston Land Drainage scheme,
- Taumutu Land Drainage scheme and Culverts,
- Wairiri Valley Land Drainage scheme,
- Hororata River Drainage,
- Bealey River flood protection.

Key issues and constraints

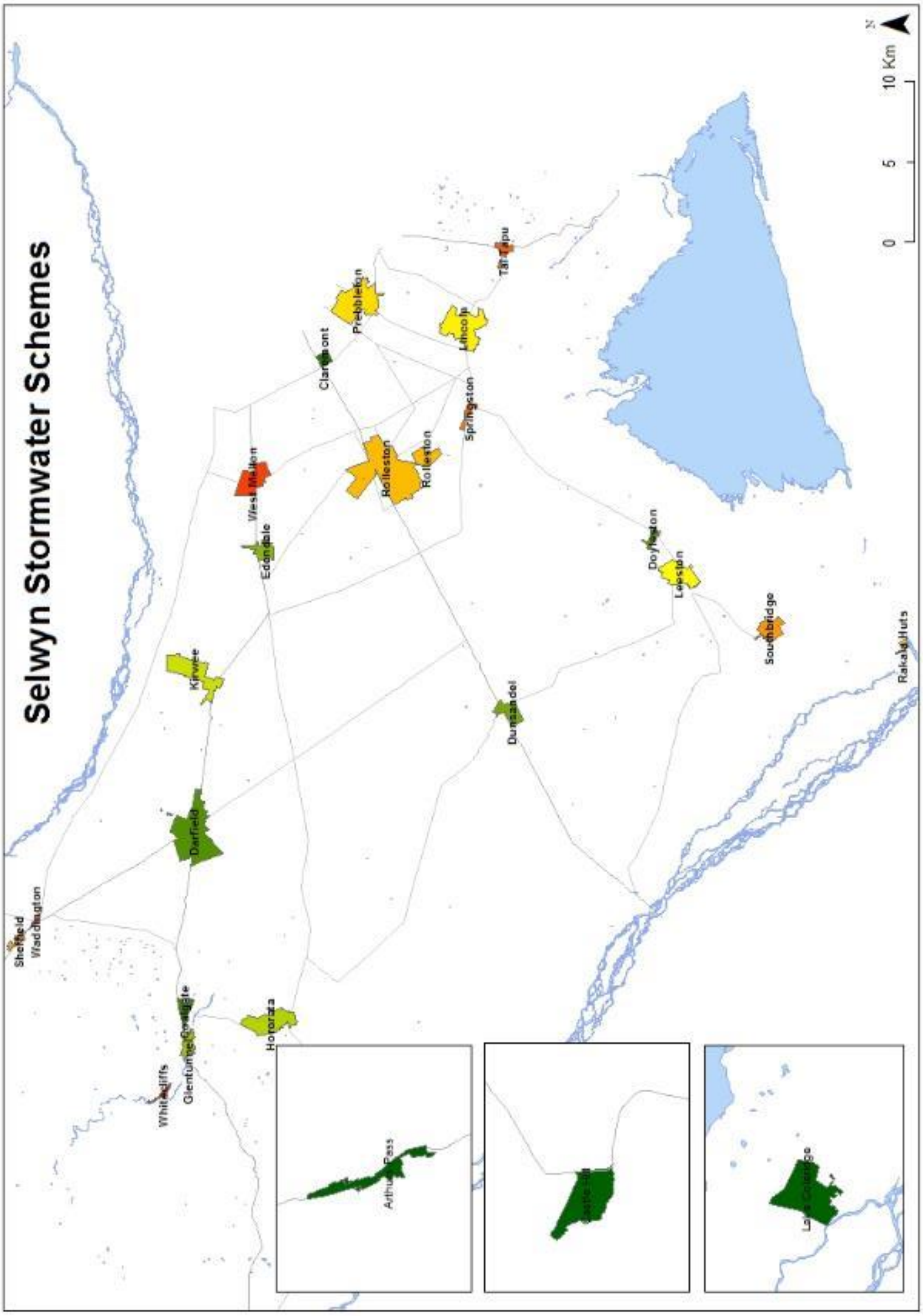
There are a number of emerging issues for Land drainage schemes. These are:

- Increased resource consent complexity;
- Increased H&S Requirements;
- Move towards environmental outcome focus;
- Increasing Iwi interest and involvement;
- Increasing LoS expectations; and
- Increased environmental monitoring and reporting.

5.1.5 Water Races

Council has been operating the water race system for approximately 130 years. The water race network is fed from six river intakes and serves a network of open channels totalling 1600 km. Of this, 600 km is marked as ‘council cleaned’. It is Selwyn District Council’s responsibility to keep these clean and clear. The remaining 1000 km is marked as ‘private cleaned’ and remain individual land owners responsibility.

There are presently three water race schemes within the district: Ellesmere, Malvern and Paparoa; these generally service the plains areas of the old County Councils (pre-1989 amalgamation). The Selwyn scheme with its intake on the Selwyn River was closed in 2009.


Selwyn Stormwater Schemes
10 Km
5
0
N
Prebbleton
Tai Tapu
Lincoln
Springston
Rolleston
West Melton
Edendale
Kirwee
Darfield
Dunsandel
Doyleston
Leeston
Southbridge
Rakaia Huts
Sheffield
Waddington
Hororata
Whitecliffs
Arthurs Pass

5.1.6 Transportation (Roads & Footpaths)

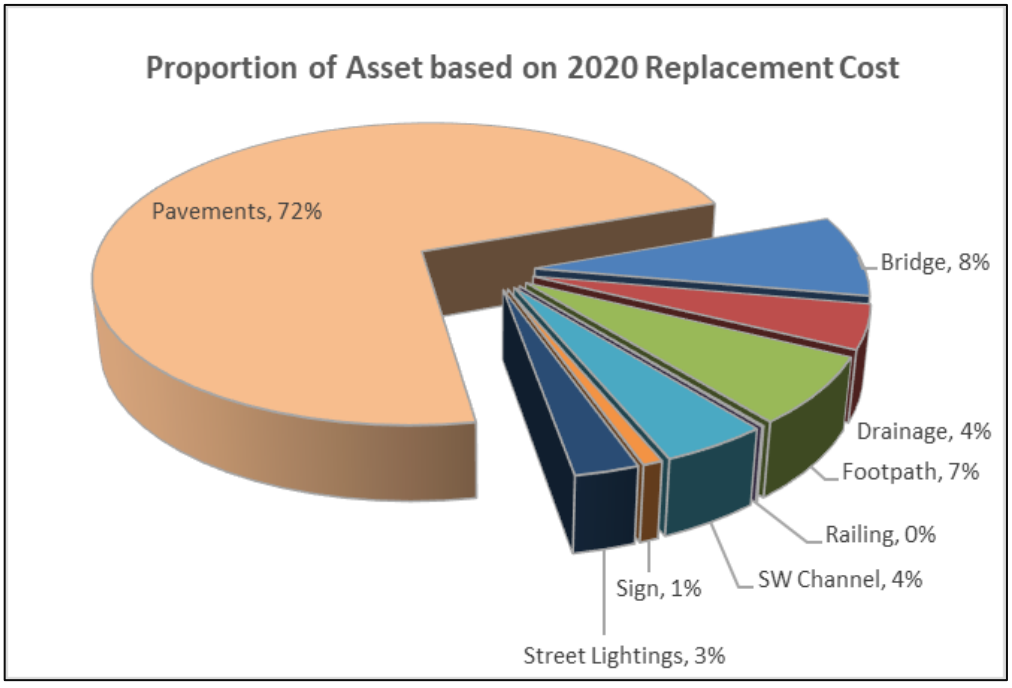
The Selwyn District Roading network is significant. The total network has a length of over 2,600 kilometres of which over 13% is situated in urban settings. 1,440km of the network is sealed, 1,129km of roads are unsealed, and 96km are unformed and unmaintained paper roads. All of the urban network is sealed, the rural network is almost evenly split between sealed and unsealed; 49% is unsealed and 51% is sealed.

Some key commuter routes such as Springs Road and Shands Road are carrying very high traffic numbers. Traffic patterns are expected to change somewhat as users change their travel patterns to include the new motorway into Christchurch city (CSM2) and associated linkages.

The transportation network includes:

- Pavements (sealed and unsealed)
- Bridges
- Drainage
- Stormwater Channels (including sumps and culverts)
- Footpaths and cycleways
- Railings
- Signs, Pavement Markings and Traffic Signals
- Street Lights

In 2020 the Replacement Cost for these assets totalled some $829 million. Annual depreciation of the asset is around $15 million. On average the asset value is growing by 3% each year.



The ONRC road hierarchy allows further classification of the elements that make up the Selwyn District Council network by traffic volume, function and use. The composition of the network by ONRC category - in terms of length and VKT - give an indication of how journeys are distributed across the network. Nearly one-third of trips made on the Selwyn network are made on just 3% of the routes.

ONRC Category	Urban (Km)	Rural (Km)	TOTAL LENGTH (Km)	Urban Journeys	Rural Journeys	ANNUAL TOTAL JOURNEYS TRAVELLED (M Veh Km)
Arterial	6	34	40	16	66	82
Primary Collector	25	191	216	28	119	148
Secondary Collector	67	555	622	22	91	113
Access	44	650	694	4	25	29
Low Volume	156	863	1,019	5	8	13
TOTAL NETWORK	**297**	**2,294**	**2,591**	**76**	**308**	**385**

Table 1: Network Statistics for network length (km) and journeys travelled (Million vehicle km) by ONRC Class - Sourced from ONRC performance measures reporting tool

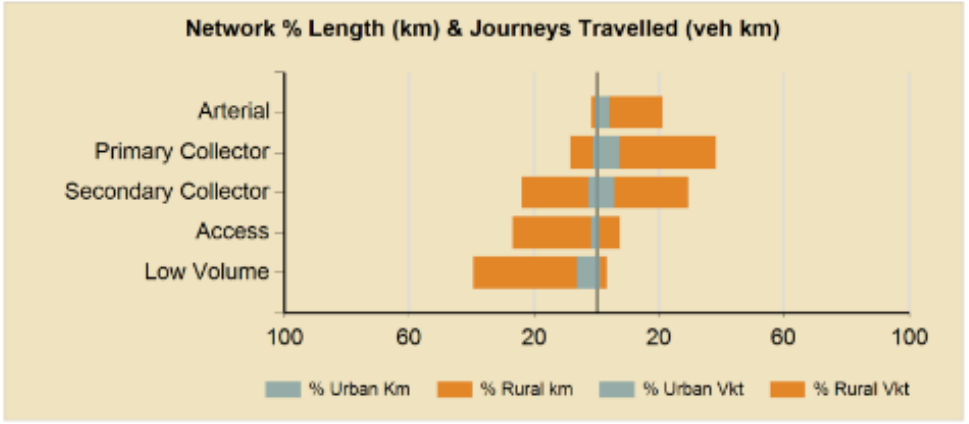


Figure 1: Network Percentage Length and Journeys Travelled - Sourced from ONRC performance measures reporting tool

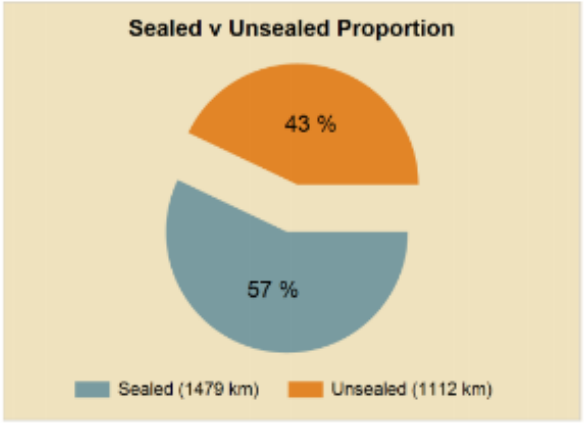


Figure 2: Sealed v Unsealed - Sourced from ONRC performance measures reporting tool

What am I looking for? The data details the road network length and number of journeys by ONRC category. Journeys travelled are measured by multiplying the volume of traffic on a road by its length. This shows where most customer journeys are made. Primary collector routes make up only 8% of the network by length but carry 38% of the amount of travel undertaken in the district due to the higher traffic volumes.

With the arterial and primary collector routes carrying significantly more traffic than the access and low volume routes, the deterioration of these pavements occurs at a greater speed and the maintenance of these routes needs to be undertaken more regularly to ensure they last. However, a fine balance needs to be struck in the approach to maintenance, particularly with respect to the arterial routes, as the upheaval that temporary works represents will impact the largest proportion of commuters on these routes.

The arterial routes carry over ten times the proportion of all journeys (21%) when considered in terms of the proportion of the network (40km, or 1.5%) they make up. 60% of all journeys on Selwyn district roads are distributed across just the arterial and primary collector routes. These numbers are boosted further by significant volumes of heavy construction and freight traffic moving between construction depots and work sites in the city, or to and from the industrial areas. Often the increase in traffic volumes and journeys has been rapid, with routes being classified higher within the ONRC hierarchy, which had previously been used much less frequently.

5.1.7 Liveability Assets (Community Facilities)

The Community Facilities Activities have a major impact on both the social and cultural quality of life for the District's residents while contributing to the creation of an attractive living environment, preserving natural areas and protecting heritage features. The Community Facilities Activity includes a diverse range of Council services aimed at providing places for recreation, leisure and community activities as well as supporting the accommodation needs of other Council services.

The Open Space Strategy 2015 provides the overall direction for parks and reserves, while the Community Facilities Activity Management Plan encompasses detail for the following service areas:

Recreation Reserves	30 Main Sport and Recreation Reserves (706 Ha) 30 Nature Reserves (447 Ha) 18 Ecological Linkages (15 Ha)
Cemeteries	19 Cemeteries (2 closed) 50+ years capacity in all cemeteries except Prebbleton, Weedons and Springston (project to extend Springston in the current financial year).
Public Toilets	4 Grade I Public Toilets 14 Grade II Public Toilets 12 Grade III Public Toilets
Community Centres and Halls (including Selwyn Sports Centre)	26 facilities including keystone Facilities - LEC, RCC (RCC to be replaced as keystone facility by Te Ara Ātea once opened) Te Ara Ātea (under construction) Selwyn Sports Centre (under construction)
Swimming Pools (including Selwyn Aquatic Centre)	1 District Aquatic Centre 2 Sub-district Community Pools (Darfield, Southbridge) 4 Community Pools - Leeston, Sheffield, Killinchy, Halkett (currently closed for the 2020/21 season)

Property & Buildings including Library buildings, Te Ara Ātea and Commercial	Heritage	Prebbleton Cottage Liffey Cottage Pioneer Hall Coronation Library Darfield Jail Darfield Railway Hut Glentunnel Library Malvern Museum Whitecliffs Railway Hut Lake Coleridge Post Office Tai Tapu Library Brookside Hall Library Bankside Depot
	Community	Darfield Library & Service Centre Leeston Council Office Building, Library & Medical Centre Rolleston Library Te Ara Atea (under construction) Lincoln Library & Service Centre Selwyn District Council HQ Offices
	Commercial	Sicon Offices and Workshops Global Bus Buildings Lincoln Country Club Health Hub (under construction) Darfield Depot Workshops
	Miscellaneous	Darfield Medical Centre • Lincoln Playcentre • Lincoln Plunket • Lincoln Toy Library Glentunnel Holiday Park
	Strategic Land	• Breach Block, Rolleston • Raeburn Farm, Darfield • Vege Block, Lincoln • Wrights Block, Kirwee
	Other Property / Land	• Vacant land areas (freehold) • Small residential properties
Rental Housing	15 houses (currently – 2020) including 3 EPH houses 3 houses planned for disposal in FY 21/22	
Gravel Reserves	225 current or former gravel reserves (34 awaiting disposal via DoC) 25 active gravel pits (as listed below where some form of activity is occurring or is planned) 237,000 m3 of material remaining for extraction (estimated)	
Forestry	55 identified forestry sites across the district Total of 122.2 ha of land currently used for forestry of which 102.5 ha is in forest cover Total of 39 ha of land previously used for forestry which is now deforested 96% of the current forest is planted in Pinus radiata and 4% in Douglas Fir	
Township Reserves and Streetscapes.	3 Civic Spaces (1 Ha) 269 Neighbourhood Reserves land parcels (88.6 Ha) 254 Recreation and Ecological Linkages (39.6 Ha) 5 Township Nature Reserves (11 Ha)	

5.1.8 Solid Waste Management

The Council provides the majority of waste and diverted material/recovery services and facilities in the District.

Collection Services include four main streams of materials from the bulk of waste collected within the District:

- Council Kerbside collection of residual waste from households and businesses.
- Council Kerbside collection of diverted material (recycling and organics) from households and businesses.
- Private provider collection of residual waste from households and businesses.
- Private provider collection of recycling from households and businesses.

Disposal and Diversion Infrastructure includes six main avenues for the management of waste materials from the District:

- Council's Pines Resource Recovery Park near Rolleston.
- Christchurch based transfer stations or recovery parks (a mixture of Christchurch City Council and private company transfer stations).
- Cleanfill facilities/sites (Council or privately owned).
- Recycling processing plants: EcoCentral Ltd in Christchurch for Council kerbside recyclables and private company Material Recovery Facilities (for commercial recycling collections such as cardboard from businesses).
- Organics processing – Council's plant at Pines Resource Recovery Park and other private compost operations.
- Alternative disposal such as farm waste pits or burning.

The Resource Recovery Park is the key asset, and kerbside bins are provided as part of the collection service.

Selwyn District Council provides a kerbside collection service covering all of the urban areas and some rural areas.

As at June 2019, there are approximately 60,000 bins in place throughout the District. This is made up of 23,000 residual waste bins, 10,000 organics bins and over 26,000 recycling bins.

The remainder of the waste, recycling and organics is taken directly by residents to the Pines Resource Recovery Park near Rolleston.

The Waste Minimisation Act 2008 legislated for all local authorities to improve the efficiency of resource use and reduce the amount of residual waste in the waste stream.

Residual waste (rubbish) is sent to the Kate Valley Regional Landfill, which has capacity and resource consent for another twenty years. A regional approach is expected to addressing waste disposal after 2040, as several Council including Christchurch City utilise Kate Valley.

5.2 Assumptions and Risk

Selwyn District Council has established a process for early development of assumptions for planning purposes. This involves discussion with activity managers, leadership team and elected representatives. The set of assumptions are adopted by Council for the purposes of developing the LTP and supporting documents, then reviewed as part of the LTP statement of proposal.

The following assumptions are regarded as most relevant to this thirty-year strategy. The complete list of assumptions is published in the Long Term Plan.

Table 5.1: Key Assumptions for 2021 – 2051 Infrastructure Strategy

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
Asset Management Area: Financial						
All	Asset lives and depreciation	NAMS	It is assumed asset lives will be as set out in the statement of accounting policies.	Moderate	There is a risk that assets will wear out more quickly than forecast and require replacement earlier than planned.	If assets require replacement more quickly than forecast, renewal or capital expenditure projects may need to be brought forward. The Council will consider the funding implications of any early replacements as they occur. Early replacement will result in a write off of the book value of the asset, increasing expenditure in the year it occurs.
All	Inflation	SOLGM/BERL forecasts	The level of prices is assumed to increase over the period of the Long Term Plan for each activity area as forecast by BERL. The level of increase assumed in the Long Term Plan is set out in the Table 2 below. The assumed increases include general prices, pay costs and construction costs.	Moderate	There is a risk that price level changes will be greater or lower than those assumed and that costs and revenues will be higher or lower than forecast.	Should the price level change differ from those assumed, expenditure, capital costs and revenues may differ from those forecast. The Council mitigates this risk by setting its rates and fees and charges each year based on its forecast costs for the following year.
All	Insurance		That an appropriate level of insurance will be secured by Council for its property and 5 waters infrastructure assets. That the premiums to be paid are affordable. That Central Government will provide a sufficient share for post event works as per the National Civil Defence Emergency Management Plan	Moderate	There is a risk that insurance will be difficult to secure and that NZTA will not provide adequate emergency funding to reinstate damaged services. There is a risk that insurance premiums will rise more rapidly than expected.	Council's assets may not be able to be insured in a similar manner to the current approach and different options may need to be considered. This includes increasing reserve funds and higher excess sums. Premiums will exceed

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
			Underground assets will be partly self- insured and that sufficient emergency funding will be available from NZTA for damage to roading assets caused by extraordinary events. That increases in Insurance Premiums will be similar to CPI.			budget allocation and savings will be required in insurance policies or funds will need to be reallocated from other areas of expenditure.
Transportation	NZTA revenue	The Council	It is assumed that the level of financial assistance received from NZTA for eligible roading and transport activities will remain at 51% for the 2021-31 period. Works associated with nationally and regionally significant state highway projects will be fully funded by NZTA funding (e.g. Southern Motorway further extensions). Funding Assistance for large Capital transport works would be achieved on a case by case basis through a Business Case approach with NZTA. Some capital projects could attract a Targeted Enhanced Financial Assistance Rate (TEFAR) on a case basis by the NZTA. NLTP Funding is provided by the NZTA in 3 year periods and that the following 7 years will be funded in a similar manner	Moderate	There is a risk that sufficient funds will not be available to pay for the planned capital projects. For example, because growth does not provide sufficient funding from development contributions or the community considers that required rate rises are not affordable. The full range of funding expected initially in a NLTP may be reduced during its period if NZTA face significant national cost increases requiring a reprioritisation of NZTA funding which may result in capital projects being deferred for funding.	The Council will assess the availability of NZTA funds as part of the annual budget process and if funds are not available, it may revise its roading and transport programme that is set out in the Long Term Plan.
All	Resource consents	The Council	Resource consents will continue to be able to be processed in statutory timeframes.	Low	There is a risk that the consent are delayed or that consent will not be obtained for the Council projects.	If consent conditions change, expenditure may increase to comply with the conditions and this may have an impact on rate levels. If consents cannot be obtained for planned projects, the project may be delayed or may not go ahead.

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
All	Return on investments	The Council in conjunction with its financial advisors	It is assumed that the Council's cash investments will generate an average return of 1.5% p.a.	Moderate	There is a risk that returns on investments will be higher or lower than forecast because actual investment balances and interest rates may vary from those used in the forecast.	If investments returns are lower than those assumed, the Council may need to increase its rates or reduce expenditure. Conversely, higher investment returns mean rates may be lower than they would otherwise have been.
All	Selwyn 2031 (District Wide Strategy)	The Council	No significant changes in the management of infrastructure assets, reserves and community facilities are expected in the short term. Actions required in the 2021-24 period can be accommodated within current forecasts.	Low	There is a risk that the visions and initiatives identified through the District wide strategy process cannot be accommodated through current planning, funding and delivery mechanisms.	Changes in service (demand, performance, condition, resourcing) may be required as a result of decisions resulting from the Strategy. Changes to Activity Planning including funding may be required.
All	Timing and level of capital expenditure	The Council	The Long Term Plan assumes that the timing and cost of capital projects and associated operating costs are as determined through the Council's activity management planning process.	High	There is a risk that capital projects may not occur as planned. This may have an impact on the costs of the project. There is also the risk that actual project costs will vary from those forecasts. Transport projects seeking subsidy will need to be developed through a Business Case approach to NZTA which may change originally anticipated outcomes	If projects do not occur as planned, capital expenditure in any year may differ from that forecast and delay may also change the cost of individual projects. The Council will consider the impact of any change as part of the annual budget process and consider the funding implications of any cost changes.

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
Asset Management Area: Growth						
All	Population Change	The Council and Statistics New Zealand	The Selwyn District population will continue to grow at a medium-high rate, similar to that experienced over the past ten years. Growth will be focused in Rolleston and the Eastern Selwyn area, with moderate rates elsewhere. Some more remote communities will only experience limited growth as has been the case for a number of years. Total population will grow to nearly 90,000 in 2031 and 122,000 in 2051. The numbers of persons per house will vary between townships, with a decrease over time Details of the population and household numbers are included in the appendix to this report.	Moderate	There is a risk that the level of population growth will be higher or lower than the projections and that the timing of population growth will differ from that in the model.	The Council has based its plans for the management and expansion of its infrastructure on the population projections. Should growth occur at different rates, it can respond by accelerating, delaying or revising planned capital works. The level of revenue from development contributions will vary from that forecast if actual growth differs from the projections, but any variation will tend to mirror the need for capital expenditure, thereby mitigating the risk to the Council of any shortfall. If growth occurs at a different rate from the projections, the forecasts for the cost of service provision will differ from the actual. Any impact on the Council's financial performance will be mitigated because the change in forecast revenue from rates and fees and charges will tend to mirror the change in the cost of service provision.
Transportation	Traffic Growth -General	The Council	There will be a growth in traffic on state highways and local networks within Selwyn district. While this will vary across the district, but generally be consistent with projected population growth rates with an emphasis on the Greater Christchurch areas of the District.	Moderate	There is a risk that traffic numbers and composition will increase at a rate beyond that expected.	Roads and infrastructure may deteriorate faster than expected through increased use. If Council is required to fund and undertake transport activities or works that are not expected or

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
	-Heavy -Passenger Transport -Walking and cycling		Heavy vehicle traffic growth will be higher than general growth with concentrations around industry and freight transport hubs, including the Rolleston inland ports. Passenger public transport growth will progressively increase in the Selwyn district. There will be a continuing effort to encourage walking and cycling as a viable transport alternative in urban areas.		Without investment in new and improved walking and cycling facilities, public transport services and infrastructure, the rate of uptake or shifting to those modes will be adversely effected. Without investment and engagement in travel demand measures (TDM) to stem traffic growth from new developments this may lead to increased traffic congestion	planned based on growth or unexpected extra use; this will put budgets under pressure, or the extent of activities or works that can be undertaken will be restricted by budget available. Council may not be able to contribute to wider outcomes to provide a more sustainable transport system that also uses alternative modes like walking, cycling and public transport to manage demands and contribute to climate change goals.
Asset Management Area: Lifecycle						
All	Central Plains Irrigation Scheme	The Council	Following on from the successful completion of Stage 1 of the Central Plains Water Ltd Scheme supplying surface water to 23,000 Ha in the Te Pirata Area; Infrastructure is being constructed to irrigate 20,000 Ha in the Darfield area (Stage 2), and 4300 Ha in the Sheffield/Springfield area. Water races with be closed at the rate predicted by Council.	Low	There is a risk that the demand for the water race network will become fragmented as farmers receive water from CPW and other sources.	If races are closed at a faster or slower rate than predicted, rates will need to be adjusted on an annual basis to suit
All	No major adverse events	The Council	It assumed that there will be no major impact from an adverse event, should one occur during the period covered by the Long Term Plan, for example, earthquake, pandemic or flood. While events may occur at any time, Council's planning will focus on operational resilience and Emergency Management.	High	There is a risk that a major adverse event will occur and result in damage to assets and additional costs to the Council.	Any major adverse event will have a significant impact on the Council and the community. The Council seeks to mitigate this risk through its Civil Defence, Risk Management and Insurance Policies.

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
All	Amalgamation	The Council	It is assumed that the Council will not be amalgamated in whole or part with other local authorities.	Low	There is a risk that the Council could be amalgamated with other local authorities.	Assets & liabilities of Council would be transferred to another body and the financial forecasts and capital programme outlined in this document would be the responsibility of the new body.
All	Water Reform	The Council	It is assumed that the Council's water activity will not be amalgamated into another body. (See further information below)	High	There is a risk that there will be significant reform of the three Waters Service Delivery area, which would have an impact on the Council's asset base and revenue streams.	Assets & liabilities of the Council's three waters activity would be transferred to another body and financial forecasts and capital programme outlined in this document would be the responsibility of the new body.
Asset Management Area: Levels of Service						
All	Community Expectations	The Council	The expectations of the Selwyn Community for the provision of services provided by Council will remain similar.	Moderate	There is a risk that there is a change in expectation for services and that the targeted level of service becomes inappropriate.	If there is an increase or reduction in the expectation of service/level of service provision, the cost and delivery model may need to be revised.
All	Community Outcomes	The Council	The Community Outcomes which link to Levels of Service will not change, apart from minor clarification. Funding to deliver the LoS will therefore occur in accordance with the communities stated priorities.	Low	Planning and service delivery is poorly aligned with community expectations	Increase in customer dissatisfaction. Reporting targets and LOS will require revision.
Asset Management Area: Sustainability						
All	Climate Change	Ministry for the Environment The Council	It is assumed that climate change is happening and that this will impact on SDC's roles and responsibilities, both from an emissions mitigation and climate change adaptation perspective.	Moderate	There is a risk that climate change will happen more quickly or much later than expected or that the impact will be different to those	If climate change happens more quickly or impacts services differently, the Council may need to carry out work on its infrastructure

Activity	Assumption area	Source of information	Stated assumption	Level of uncertainty	Risk	Potential impact/consequence if assumption wrong
			Adapting to the challenges and opportunities of climate change is a significant issue for Council and it will take into account the predicted impacts of climate change as it plans, builds and renews its infrastructure. To achieve a coherent response to the impact of climate change on its infrastructure, Council has integrated the Climate change adaptation and mitigation planning process to the District's long term planning process. Climate change impact assessment is an iterative exercise and Council has been pursuing it actively ("Impact of Climate Cycles and Trends on Selwyn District Water Assets" -Aqualinc , 2016 and 2020) The current assessments of climate change impact on SDC's infrastructure and activities shows that there will be a low to minor impact within the period covered by the Long Term Plan. The expansion/renewal of infrastructure at Selwyn Huts will consider both climate change projections and community views in decision-making. This will be informed by studies including "Impact of Climate Cycles and Trends on Selwyn District Water Assets" (Aqualinc , 2016 and 2020)		predicted. Council's business units may not recognise climate change adequately in the delivery of their services.	assets or could result in early capital spend. Decisions made now without considerations may have intergeneration effects on land use decisions, environmental policy and infrastructure decisions e.g. relying on unsuitable assets and resources in highly vulnerable parts of the district.

Cumulative Inflation assumptions used in the preparation of the prospective financial statements

For the Purposes of the Infrastructure Strategy the following inflation estimates from 2031:

Roading	5 Waters	Property	Staff	Other
2.9%	3.1%	2.4%	2.6%	2.7%

Population by Township

Township	LTP 2021 - 2031													
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Rolleston	19,720	20,618	21,516	22,189	22,862	23,534	24,207	24,879	25,820	26,760	27,707	28,650	29,591	30,511
Lincoln	7,783	8,153	8,524	8,865	9,206	9,547	9,887	10,228	10,283	10,337	10,553	10,769	10,985	11,196
Prebbleton	4,977	5,228	5,478	5,697	5,916	6,136	6,355	6,574	6,674	6,773	6,918	7,063	7,207	7,349
West Melton	2,420	2,581	2,743	2,733	2,722	2,712	2,702	2,692	2,680	2,668	2,762	2,855	2,948	3,039
Leeston	2,592	2,647	2,703	2,739	2,775	2,812	2,848	2,884	2,873	2,861	2,953	3,044	3,136	3,225
Darfield	3,374	3,461	3,549	3,619	3,689	3,760	3,830	3,900	3,967	4,033	4,122	4,211	4,300	4,387
Burnham	867	867	866	862	859	855	851	848	844	840	840	840	840	840
Tai Tapu	531	546	562	567	573	579	584	590	588	586	596	607	617	627
Springston	506	509	512	511	510	509	508	507	506	504	507	510	513	516
Castle Hill	371	393	415	434	453	471	490	509	540	571	573	575	576	578
Coalgate / Glentunnel / Whitecliffs	1,194	1,232	1,271	1,291	1,311	1,330	1,350	1,370	1,403	1,436	1,443	1,451	1,459	1,467
Doyleston	310	315	320	322	324	326	329	331	335	339	339	338	338	338
Dunsandel	477	481	485	487	489	491	493	495	497	499	501	504	507	509
Hororata	574	589	605	610	615	620	625	630	638	646	649	652	655	658
Kirwee	999	1,020	1,042	1,043	1,045	1,046	1,047	1,049	1,052	1,055	1,071	1,088	1,105	1,121
Lake Coleridge	168	172	176	179	182	185	188	190	195	200	201	202	203	204
Rakaia Huts	308	308	308	306	305	304	303	302	300	299	300	300	300	301
Sheffield / Waddington	471	490	510	520	529	539	549	559	574	590	593	596	600	603
Southbridge	983	1,006	1,029	1,040	1,052	1,063	1,075	1,086	1,098	1,109	1,110	1,111	1,113	1,114
Springfield	475	479	483	486	489	492	494	497	502	508	511	514	518	521
Rural	22,372	22,745	23,119	23,402	23,686	23,969	24,252	24,536	24,876	25,215	25,348	25,483	25,621	25,756
Total	71,471	73,843	76,215	77,904	79,592	81,280	82,968	84,656	86,243	87,829	89,596	91,363	93,130	94,861
Annual Change		2,372	2,372	1,688	1,688	1,688	1,688	1,688	1,587	1,587	1,767	1,767	1,767	1,731

Households by Township

Township	LTP 2021 - 2031													
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Rolleston	6,755	7,067	7,380	7,647	7,914	8,181	8,448	8,715	9,095	9,475	9,859	10,242	10,626	11,004
Lincoln	2,666	2,795	2,924	3,056	3,188	3,319	3,451	3,583	3,620	3,657	3,749	3,841	3,933	4,024
Prebbleton	1,705	1,792	1,879	1,964	2,049	2,133	2,218	2,303	2,350	2,397	2,458	2,520	2,581	2,641
West Melton	829	885	941	941	942	942	942	943	943	944	982	1,020	1,059	1,097
Leeston	888	907	927	944	960	977	994	1,010	1,011	1,012	1,050	1,089	1,127	1,165
Darfield	1,156	1,186	1,217	1,247	1,277	1,307	1,336	1,366	1,397	1,427	1,466	1,504	1,542	1,580
Burnham	297	297	297	297	297	297	297	297	297	297	297	297	297	297
Tai Tapu	182	187	193	195	198	201	204	207	207	207	212	217	221	226
Springston	173	175	176	176	177	177	177	178	178	178	180	182	184	186
Castle Hill	127	135	142	150	157	164	171	178	190	202	203	205	206	207
Coalgate / Glentunnel / Whitecliffs	409	422	436	445	454	462	471	480	494	508	513	517	522	527
Doyleston	106	108	110	111	112	113	115	116	118	120	120	121	121	121
Dunsandel	163	165	166	168	169	171	172	173	175	176	178	180	182	183
Hororata	196	202	207	210	213	215	218	221	225	228	230	232	234	236
Kirwee	342	350	357	359	361	363	365	367	370	373	381	389	396	404
Lake Coleridge	58	59	60	62	63	64	65	67	69	71	71	72	73	73
Rakaia Huts	105	105	105	106	106	106	106	106	106	106	106	107	108	108
Sheffield / Waddington	161	168	175	179	183	187	192	196	202	209	211	213	214	216
Southbridge	337	345	353	358	364	369	375	381	386	392	394	396	398	400
Springfield	163	164	166	167	169	171	172	174	177	180	182	184	186	187
Rural	7,662	7,796	7,930	8,063	8,196	8,329	8,462	8,595	8,759	8,922	9,006	9,091	9,175	9,257
Total	24,479	25,311	26,142	26,845	27,548	28,250	28,953	29,656	30,369	31,083	31,850	32,617	33,385	34,140
Annual Change		832	832	703	703	703	703	703	713	713	767	767	767	756

Dwellings by Township

Township	LTP 2021 - 2031													
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Rolleston	7,501	7,849	8,196	8,493	8,789	9,086	9,383	9,679	10,101	10,523	10,949	11,375	11,801	12,221
Lincoln	2,960	3,104	3,247	3,394	3,540	3,686	3,833	3,979	4,020	4,061	4,164	4,266	4,368	4,469
Prebbleton	1,893	1,990	2,087	2,181	2,275	2,369	2,463	2,558	2,610	2,662	2,730	2,798	2,866	2,933
West Melton	920	983	1,045	1,045	1,046	1,046	1,047	1,047	1,048	1,048	1,091	1,133	1,176	1,218
Leeston	986	1,008	1,030	1,048	1,067	1,085	1,104	1,122	1,123	1,124	1,166	1,209	1,251	1,293
Darfield	1,283	1,318	1,352	1,385	1,418	1,451	1,484	1,517	1,551	1,585	1,628	1,670	1,713	1,755
Burnham	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Tai Tapu	202	208	214	217	220	223	226	230	230	230	235	241	246	251
Springston	193	194	195	196	196	196	197	197	198	198	200	202	204	206
Castle Hill	141	150	158	166	174	182	190	198	211	225	226	227	229	230
Coalgate / Glentunnel / Whitecliffs	454	469	484	494	504	513	523	533	549	564	569	575	580	585
Doyleston	118	120	122	123	125	126	127	129	131	133	134	134	134	135
Dunsandel	181	183	185	186	188	190	191	193	194	196	198	200	202	204
Hororata	218	224	230	233	236	239	242	245	249	254	256	258	260	263
Kirwee	380	388	397	399	401	404	406	408	411	414	423	432	440	449
Lake Coleridge	64	66	67	69	70	71	73	74	76	79	79	80	81	81
Rakaia Huts	117	117	117	117	117	117	117	117	117	118	118	119	120	120
Sheffield / Waddington	179	187	194	199	203	208	213	217	225	232	234	236	238	240
Southbridge	374	383	392	398	404	410	416	423	429	436	438	440	442	444
Springfield	181	182	184	186	188	190	192	193	196	199	202	204	206	208
Rural	8,509	8,658	8,807	8,954	9,102	9,250	9,398	9,546	9,727	9,909	10,002	10,096	10,189	10,281
Total	27,186	28,109	29,033	29,813	30,594	31,374	32,155	32,935	33,727	34,520	35,372	36,224	37,076	37,915
Annual Change		924	924	780	780	780	780	780	792	792	852	852	852	839

LTP 2031 - 2051															
2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
31,430	32,346	33,260	34,172	35,070	35,966	36,861	37,754	38,646	39,492	40,338	41,182	42,026	42,869	43,655	44,441
11,407	11,618	11,829	12,039	12,247	12,454	12,661	12,868	13,075	13,274	13,473	13,672	13,870	14,069	14,255	14,441
7,490	7,631	7,773	7,914	8,053	8,191	8,330	8,469	8,607	8,740	8,873	9,006	9,139	9,271	9,395	9,520
3,130	3,220	3,311	3,401	3,490	3,579	3,667	3,756	3,844	3,928	4,012	4,096	4,180	4,264	4,343	4,421
3,315	3,404	3,493	3,583	3,670	3,758	3,846	3,933	4,021	4,104	4,188	4,271	4,354	4,438	4,516	4,594
4,474	4,561	4,648	4,735	4,821	4,906	4,992	5,077	5,163	5,245	5,328	5,410	5,493	5,575	5,652	5,729
840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840
637	647	657	668	678	688	698	708	718	727	737	747	757	767	776	785
519	522	525	528	531	535	538	541	544	548	551	555	558	562	565	569
580	582	584	586	588	590	592	594	596	598	600	602	605	607	609	611
1,475	1,483	1,491	1,499	1,507	1,515	1,524	1,532	1,540	1,549	1,558	1,567	1,575	1,584	1,593	1,601
338	338	338	338	338	338	339	339	339	339	340	340	341	341	342	342
512	515	518	521	523	526	529	532	535	538	541	545	548	551	554	557
661	665	668	671	675	678	681	685	688	692	696	699	703	707	710	714
1,138	1,154	1,171	1,188	1,204	1,220	1,237	1,253	1,270	1,286	1,302	1,318	1,335	1,351	1,366	1,381
205	205	206	207	208	209	210	211	212	213	214	215	217	218	219	220
301	302	302	303	304	304	305	305	306	307	308	309	310	311	312	313
606	609	612	616	619	622	626	629	632	636	639	643	646	650	653	657
1,116	1,117	1,119	1,121	1,122	1,124	1,126	1,128	1,130	1,133	1,136	1,139	1,142	1,144	1,147	1,150
525	528	532	535	539	542	546	549	553	557	561	564	568	572	576	579
25,894	26,034	26,176	26,320	26,462	26,606	26,751	26,898	27,046	27,203	27,360	27,518	27,677	27,837	27,990	28,145
96,592	98,322	100,053	101,784	103,488	105,193	106,898	108,602	110,307	111,951	113,595	115,239	116,883	118,527	120,069	121,610
1,731	1,731	1,731	1,731	1,705	1,705	1,705	1,705	1,705	1,644	1,644	1,644	1,644	1,644	1,541	1,541

LTP 2031 - 2051															
2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
11,382	11,759	12,137	12,515	12,889	13,264	13,638	14,012	14,386	14,728	15,069	15,411	15,753	16,094	16,408	16,721
4,115	4,205	4,296	4,387	4,476	4,566	4,656	4,746	4,836	4,918	5,000	5,082	5,164	5,246	5,321	5,396
2,702	2,762	2,823	2,883	2,943	3,003	3,063	3,123	3,183	3,237	3,292	3,346	3,401	3,456	3,506	3,556
1,134	1,172	1,210	1,248	1,285	1,323	1,360	1,397	1,435	1,469	1,503	1,537	1,571	1,606	1,637	1,668
1,202	1,240	1,278	1,316	1,353	1,391	1,428	1,465	1,503	1,537	1,571	1,605	1,640	1,674	1,705	1,736
1,618	1,656	1,694	1,731	1,769	1,806	1,844	1,881	1,918	1,953	1,987	2,021	2,055	2,089	2,121	2,152
297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297
230	235	240	244	249	253	258	262	267	271	275	279	283	287	291	295
188	189	191	193	195	197	199	200	202	204	206	207	209	211	212	214
208	209	210	212	213	214	215	216	217	218	219	221	222	223	224	225
531	536	540	545	549	554	558	563	567	571	576	580	584	588	592	595
122	122	123	123	123	124	124	125	125	125	126	126	126	127	127	127
185	187	188	190	192	193	195	197	198	200	201	203	204	206	207	209
238	240	242	244	246	248	250	252	254	256	258	259	261	263	265	266
412	419	427	435	442	450	457	465	473	479	486	493	500	507	513	520
74	74	75	75	76	77	77	78	78	79	79	80	80	81	81	82
109	109	110	111	111	112	112	113	114	114	115	115	116	116	117	117
218	220	222	223	225	227	229	231	232	234	236	237	239	241	242	244
402	403	405	407	409	411	413	414	416	418	420	421	423	424	426	428
189	191	193	195	197	199	201	203	205	207	209	210	212	214	215	217
9,340	9,423	9,506	9,588	9,670	9,752	9,834	9,916	9,998	10,073	10,148	10,223	10,298	10,372	10,441	10,510
34,896	35,651	36,407	37,162	37,911	38,659	39,408	40,156	40,905	41,588	42,271	42,954	43,637	44,320	44,948	45,575
756	756	756	756	749	749	749	749	749	683	683	683	683	683	627	627

LTP 2031 - 2051															
2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
12,640	13,060	13,479	13,899	14,315	14,730	15,146	15,561	15,977	16,356	16,736	17,115	17,494	17,874	18,222	18,570
4,570	4,670	4,771	4,872	4,971	5,071	5,171	5,271	5,370	5,461	5,553	5,644	5,735	5,826	5,909	5,993
3,001	3,068	3,135	3,202	3,268	3,335	3,401	3,468	3,534	3,595	3,656	3,717	3,777	3,838	3,894	3,949
1,260	1,302	1,344	1,386	1,427	1,469	1,510	1,552	1,593	1,631	1,669	1,707	1,745	1,783	1,818	1,853
1,335	1,377	1,419	1,461	1,503	1,544	1,586	1,628	1,669	1,707	1,745	1,783	1,821	1,859	1,894	1,928
1,797	1,839	1,881	1,923	1,964	2,006	2,047	2,089	2,131	2,168	2,206	2,244	2,282	2,320	2,355	2,390
330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330
256	261	266	271	276	281	286	291	296	301	305	310	315	319	323	328
208	210	212	214	216	219	221	223	225	226	228	230	232	234	236	237
231	232	234	235	236	238	239	240	241	243	244	245	246	247	248	249
590	595	600	605	610	615	620	625	630	635	639	644	648	653	657	661
135	136	136	137	137	137	138	138	139	139	140	140	140	141	141	141
205	207	209	211	213	215	217	218	220	222	224	225	227	229	230	232
265	267	269	271	273	276	278	280	282	284	286	288	290	292	294	296
457	466	474	483	491	500	508	516	525	532	540	548	556	563	570	577
82	82	83	84	84	85	86	86	87	87	88	89	89	90	90	91
121	122	122	123	124	124	125	126	126	127	127	128	129	129	130	130
242	244	246	248	250	252	254	256	258	260	262	264	265	267	269	271
446	448	450	452	454	456	458	460	462	464	466	468	470	471	473	475
210	213	215	217	219	221	223	226	228	230	232	234	236	237	239	241
10,373	10,465	10,557	10,649	10,740	10,831	10,922	11,013	11,104	11,187	11,270	11,353	11,436	11,519	11,596	11,672
38,754	39,594	40,433	41,272	42,103	42,934	43,766	44,597	45,428	46,187	46,945	47,704	48,463	49,221	49,918	50,615
839	839	839	839	831	831	831	831	831	759	759	759	759	759	697	697

6.0 MANAGING CHALLENGES AND EMERGING TRENDS

The task of building, operating and maintaining these infrastructure assets in an **affordable** and **sustainable** manner is becoming increasingly difficult in view of:

- Rapid Growth
- Demographic changes
- Changing Government Priorities and legislation
- National and Regional priorities for Transport
- Climate Change
- Environmental Impacts, sustainability and Compliance requirements
- Infrastructure Resilience
- Aging infrastructure
- Economic Activity
- Affordability
- Tourism
- Progressing Capital Projects
- Impacts of COVID-19
- Rates & Charging Mechanisms
- New Technologies

Council have considered these issues carefully in terms of community wellbeing, and identified the following as the future expectation to be addressed.

Activity	Issues
Transportation	Increasing traffic with growth Changes to vehicles in future Affordability in maintaining the network Public transport improvements and mass rapid transit on the horizon *Investment in maintenance needs to keep up with issues in parts of the district* *Do we need to take bolder steps are drive greater change and efficiencies through our road maintenance?* *Consider different models as current approach involves overspend* *Will disruptive technology change our long term strategy?* *In terms of PT and MRT we need to have nimble and adaptable solutions not locked into hard infrastructure that doesn't suit in the future* *Investment in footpaths – wider and smoother to suit aging population*

Activity	Issues
Water Supply	Increasing demand and demand management Sourcing to meet demands (quality and quantity) in the future *Should we be more proactive about water use?* *Is water storage part of our long term strategy?* *Water quality and security should be our top priority (Te Mana o Te Wai)* *What is the impact of nitrates on source water quality?* *Water quality management – community against chlorination* Governance and management structures *Small stand-alone schemes unlikely to be sustainable in the long term. Can they continue or should amalgamation be the intention?*
Wastewater – Collection, treatment and disposal	Scheme distribution/augmentation across the district Protection of water resources aligns with our top priority - *Water quality and security (Te Mana o Te Wai)* Environmental standards *General support for centralisation; noting consideration of resilience and system failure if combined*
Stormwater and Land Drainage	Managing flood risk; consider climate change storm intensity Protection of water resources aligns with our top priority - *Water quality and security (Te Mana o Te Wai)* Environmental standards Greater responsibility for stormwater consents *What is Council's future role in Te Waihora – will it be greater and what will be involved (action and costs)*
Water Races	The role of water races and future options *Need to move on this for clarity*
Waste Management	Future community expectations Governance and management structures
General item affecting the others: Land availability and form of development	*Land availability – urban capacity model suggests there is a shortage* *Does more land need to be made available for development or is a change in development appropriate?* *How do we encourage greater variation in development type – will the market be interested?* *Is the current approach producing affordable housing, and affordable long term costs (including rates)* *Is the future of Rolleston as a 'Large Rural Town' or a 'City' with a range of housing types?* *Demographic change – need to be mindful of the type of growth – not just growth. Nationally growth is in the older age groups, this will happen in Selwyn too. Road, footpath and community facilities to suit; access to health facilities - limits growth in smaller centres.*

Activity	Issues
Financial Pressures	*Balancing urban and rural demand* *Maintaining affordability*

6.1 Rapid Growth

Overview

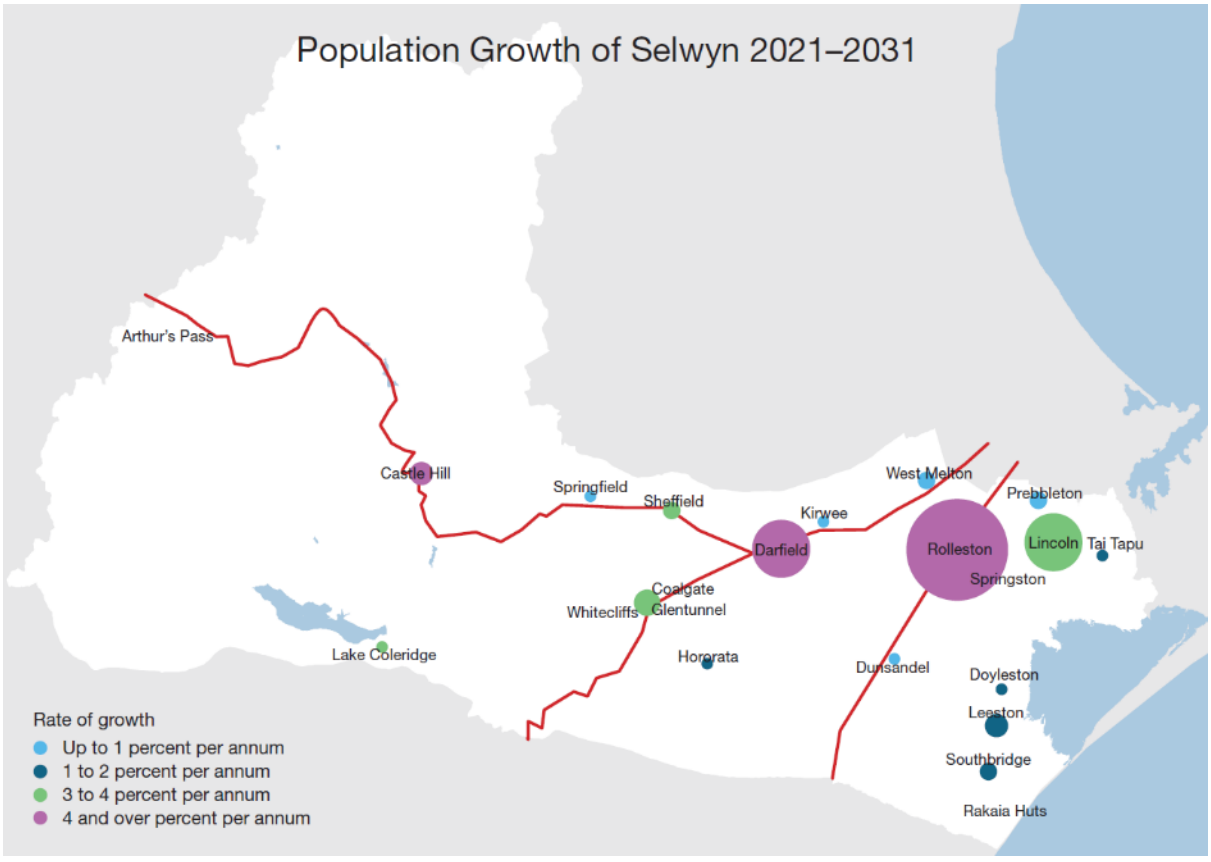
The Selwyn District is one of the fastest growing districts in New Zealand.

The population of the Selwyn District has grown rapidly over the past thirty years, from 20,520 in 1986 to approximately 65,600 in 2019, an overall increase of 220%. The rate of growth has also increased each decade. This is a substantially greater rate of growth than experienced by either the Canterbury Region (+46%) or total New Zealand (+55%).

This growth has created opportunities, but also placed stress on systems and infrastructure that support and sustain the community's well beings.

It is projected that the population will increase by a further 18,125 people to 89,596 over the 2021-31 period.

Figure 2.1 shows that the majority of growth will occur in the eastern portion of the district.



Projected Growth in Selwyn Townships 2021 - 2031

Figure 2: **Rolleston Growth 1940-2019 (Canterbury Map Viewer, Environment Canterbury)**

Projecting Growth Patterns

Council engaged Market Economics to develop the Selwyn Growth Model. This model allocates the dwelling projection to identified capacity within the district based on spatial analysis and planning provisions. This is a constrained model over the period to 2031 and essentially reallocates demand to where there is capacity.

Beyond 2031 the growth forecasts are unconstrained – that is, it is assumed land and infrastructure with be made available to support continued growth. This work is complemented by a review of projections, especially an understanding of internal migration, by Dr Natalie Jackson. The review was rigorous and gives some confidence in the model being used to quantify population projections.

In confirming the capacity within Selwyn District, the assumption was to include land within the Projected Infrastructure Boundary and calculated based on recent developed densities. These projections can be proven wrong at any time as there are a range of influencing factors that would completely change the environment the projections were prepared for.

The Selwyn District population will continue to grow at a medium-high rate, slightly lower than that experienced over the past ten years. The projections are lower because of the implications and uncertainty post-COVID and an anticipated reduction in post-earthquake growth. Growth will continue to be focused in Rolleston and the Eastern Selwyn area, with moderate rates elsewhere. Some more remote communities will only experience limited growth. Total population will grow to over 90,000 in 2031 and nearly 122,000 in 2051. The numbers of persons per house will vary between townships, with a decrease over time.

The translation of population into households depends on demographics and the changing nature of household composition. The relationship between households and dwellings is based on a ratio to incorporate those houses temporarily empty either because they are holiday homes or for sale. As with other parts of New Zealand there is an aging factor, and Selwyn expects a 35% increase in people aged 65 and over.

There is a risk that the level of population growth will be higher or lower than the projections and that the timing of population growth will differ from that in the model.

The Council has based its plans for the management and expansion of its infrastructure on these projections. Should growth occur at different rates, it can respond by accelerating, delaying or revising planned capital works. The level of revenue from development contributions will vary from that forecast if actual growth differs from the projections, but any variation will

tend to mirror the need for capital expenditure, thereby mitigating the risk to the Council of any shortfall.

If growth occurs at a different rate from the projections, the forecasts for the cost of service provision will differ from the actual. Any impact on the Council's financial performance will be mitigated because the change in forecast revenue from rates and fees and charges will tend to mirror the change in the cost of service provision.

Growth - Our Space 2018 - 2048:

Our Space builds on the growth detailed in the LURP, UDS, Regional Policy Statement PC1 and Selwyn District Plan policies and Land Use Zoning. Our Space coordinates growth within Greater Christchurch setting Medium and Long Term growth minimum targets for the territorial authorities.

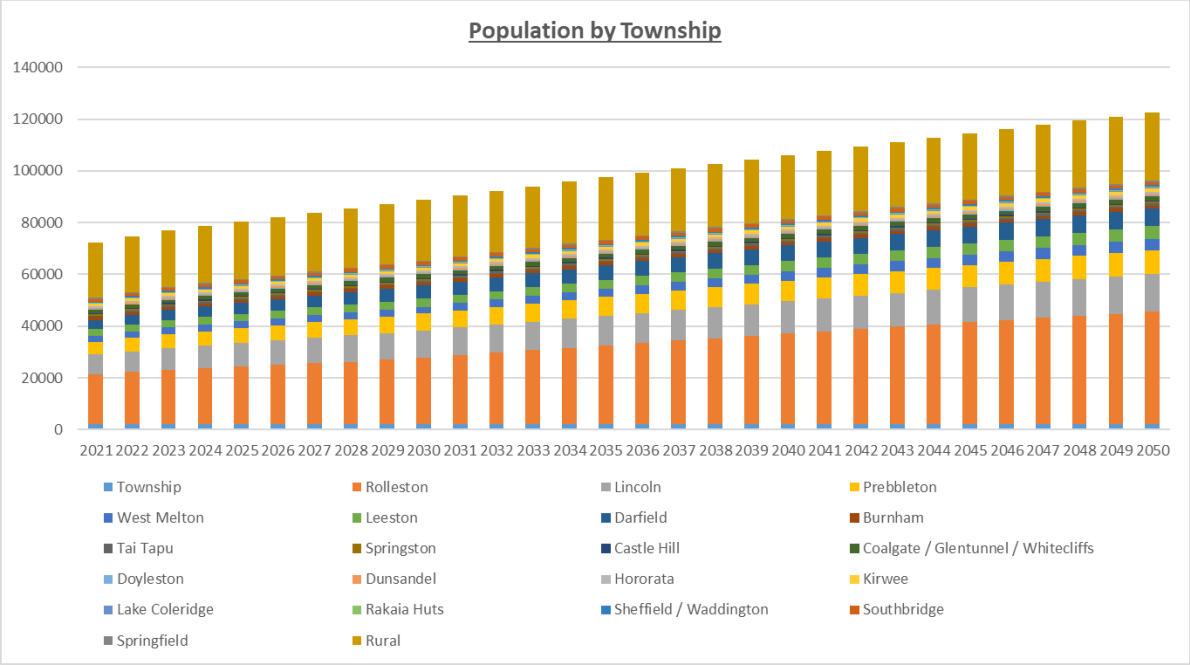
It is assumed Council will be able to provide sufficient controls on development, and establish any essential strategic infrastructure (as agreed) to facilitate the implementation of Our Space and in accordance with the Regional Policy Statement and national direction on urban development (e.g. National Policy Statement on Urban Development Capacity).

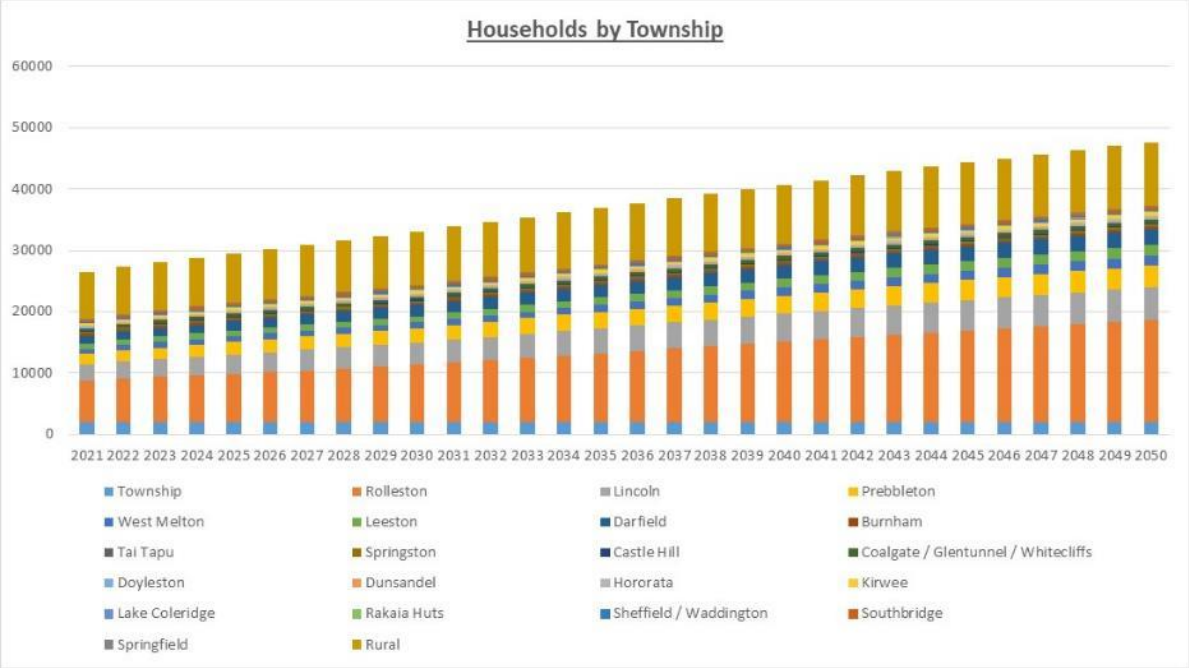
There is a risk that development will be disconnected and/or at a rate faster or slower than expected. If development takes unexpected patterns, or becomes disjointed, the Council will need to review and revise its capital works programmes.

It will also need to revise operations and maintenance budgets and renewals programmes to suit unpredicted demand and disconnected development.

Achieving coordinated development in "brownfield" areas can also be problematic as dealing with multiple landowners with varying degrees of expectations increases the complexity and potentially, the cost of development. The Council will need to continue to work on providing for infill and intensification in appropriate locations.

As with population projections, frameworks and actions to address growth are reliant on many factors and assumptions. The size and rate of growth will remain considerable factors that Council has little control over.





Housing Capacity Assessment

As a rapid growth area, Selwyn District Council is required to undertake a **Housing Capacity Assessment**

Applying the Selwyn growth model, the assessment determined there is a housing capacity shortfall of existing zoned land of around 1,500 dwellings in the greater Christchurch portion of Selwyn District

Actions to address this include:

- District Plan Review
- Council rezoning future development urban areas
- Update structure plans and further strategic spatial planning
- Private plan changes

From the response to date, it appears private plan changes will be actively promoted.

Impact of Growth on Core Activities

5 Waters	Although the district is experiencing exceptional growth, the land drainage rating base will remain static while the water races network will likely decline. The water, stormwater and wastewater rating base will increase in the main growth areas of Rolleston and Lincoln. Significant growth is predicted for Darfield, which is not currently served by a wastewater system. Based on current community growth trends, demand for water, wastewater and stormwater, services have the potential to exceed consented allowances in some schemes. This analysis is based on the Council's population information, a detailed review of historical records and forward predictions of use, after factoring in potential climate changes as well as engineering staff / contractor knowledge. Achieving reasonable usage, particularly in the areas of water (human drinking water and stock water) together with wastewater treatment and disposal is a key factor in future planning. In particular, the need to ensure that water is used wisely, sits above all other issues in the operations and maintenance sphere. Council has an active demand management strategy for water supplies. The strong relationships between water use and

	wastewater disposal, stormwater, water race and land drainage systems have been provided for in integrated projects.
Transportation	Traffic numbers have increased dramatically in Eastern Selwyn, and this is expected to continue into the future. The motorway extension to Rolleston enables convenient travel into Christchurch City, and improvement in the north-west quadrant will also improve access to the industrial zone, airport and further north. With the establishment of two inland ports and ongoing expansion of Izone and IPort, increases in heavy vehicle numbers will be significant. Agricultural development across the plains will also increase heavy vehicle traffic on rural routes, as trucks cart supplies to farm and product from farms. With three dairy factories processing significant milk quantities, dairy will continue to influence heavy traffic movements. In managing and planning transport services, Council needs to ensure safety and alternative modes of transport are considered. Council has developed a Road Safety Strategy and a comprehensive Walking and Cycling Strategy. Walking and cycling is a key part of mode shift, especially from single occupancy cars. Along with its role as a passenger transport partner, Council is actively pursuing a range of transport options. As the district's towns develop, there is a change in land use to more intensive commercial and residential development. Town centre upgrades better align infrastructure renewals and upgrades with user's expectations. This is seen as a key success factor as Rolleston transforms through the Rolleston Town Centre development. The Lincoln town centre upgrade is also due to proceed in the next three to five years. Further discussion with the community is required to determine the best approach, timing and affordability mix.
Community Facilities	The desire for facilities is commensurate with the growth of the district's population. While established communities may have a range of facilities, the areas undergoing rapid growth do not. There is also a threshold level where larger facilities are required, such as indoor sports centres, and aquatic centres. Council is tracking these demands closely and a programme of development is key to this plan. This situation means that further investment in the provision of community facilities to meet current and future demand for both outdoor and indoor recreation and leisure activities. A number of significant projects are indicated in the Community Facilities Activity Management Plan that recognise the need to plan and provide for expanded space and facilities responding to district growth. This includes projects associated with Rolleston Town Centre development, additional space for sports and recreation in some localities and provision of new community centre facilities. In planning for new facilities it is also important to consider trends in recreation and sport and to recognise changes in demand to enable an appropriate response. In preparing this plan, work has been carried out to understand future demand for sport and recreation in the district to inform the provision and timing of investment in facilities needed to meet demand. Prior to the global pandemic situation there had been an annual increase in visitors both passing through and staying in the district. This situation placed demand pressure on existing services and particularly in regard to public conveniences and places to camp (including freedom camping sites).

	Council has invested in improvements to camping sites and public toilets over the last few years with support from the Tourism Infrastructure Fund. There are no outstanding significant capacity issues identified over the next ten years but, as the visitors return, there will be a need to continue to maintain services and the standard of facilities. Preservation of the natural environment and providing opportunities for access to wilderness areas has become an increasingly popular theme. The Community Facilities Activity Management Plan provides for modest investment in this area with work planned at Yarrs Lagoon and the potential to re-create indigenous vegetation areas within the planned Large Scale Park.
Solid Waste	The growth in demand for solid waste services closely reflects population growth in the district. Commercial and industrial activity affect the quantity and composition of waste and there is considerable waste from construction during the sustained high levels of construction activity. There is a community desire to reduce residual waste, which is expected to increase in popularity in the future, as resources are viewed more holistically. Community support to expand recycling opportunities is expected. Kerbside collection is a scalable service, and managing changes in demand a key to the contract with the service provider.

6.2 Demographic Changes

Along with rapid overall growth, the composition of growth is an important factor.

Currently the Selwyn population has a younger demographic profile than much of rural and provincial New Zealand. Families see Selwyn, particularly Rolleston, as an attractive option and growth is reflected in the number of new schools required.

This is commensurate with the lifestyle Council seeks to keep at the centre of the District's development and the promotion of community wellbeing.

However, aging is expected to follow a similar pattern to the majority of NZ. There is some uncertainty about this as patterns tend to be masked by the high growth rate, and the multi-generational patterns for Selwyn's residents remain unknown.

A reduction in the number of persons per household reflects the census data and the normal pattern of aging populations. Household size varies across the district and it is expected this will continue to reduce to greater numbers of smaller households over time.

6.3 Changing Government Priorities and Legislative Environment

6.3.1 National Infrastructure Plan 2015

The government's objective is that, by 2045, New Zealand's infrastructure should be resilient and coordinated and contribute to growth and increased quality of life. This will be achieved through better use of existing assets and better allocation of new investment, as set out in the New Zealand Infrastructure Plan 2015.

The National Infrastructure Plan 2015 (NIP 2015) is the third National Infrastructure Plan to be released by the Government. That set an overall direction for infrastructure management.

Legislation and policy statements development cascade from the direction set in the National Infrastructure Plan

Environmental Compliance and progress is reflected through national policy statements and promulgated through regional and district plans.

6.3.2 New Zealand Infrastructure Commission/Te Waihanga Bill 2019

This Bill establishes the New Zealand Infrastructure Commission/Te Waihanga as an autonomous Crown entity. The Commission will be mandated to develop a long-term national infrastructure strategy, working with central and local government as well as the private sector with a view to tackling the systemic problems the sector has faced for many years.

6.3.3 Resource Management Act 1991 (RMA) Review

Within the next few years, the RMA is expected to be repealed and replaced with new legislation. This will change how Selwyn District Council undertakes strategic planning and may affect all existing consents for Council services.

Three new pieces of legislation are proposed:

- Natural and Built Environments Act
- Strategic Planning Act
- Climate Change Adaptation Act

Natural and Built Environments Act

This is the core piece of legislation to replace the RMA. The purpose of this Act is to enhance the quality of the environment to support the wellbeing of present and future generations.

This would be achieved by:

- promoting positive outcomes for both the natural and built environments
- ensuring that use, development and protection of resources only occur within prescribed environmental limits
- ensuring adverse effects of activities on the environment are avoided, remedied or mitigated.

Under the Act, central government's proposed new National Planning Framework will provide a set of mandatory national policies and standards on specified aspects of the new system. These will include environmental natural limits, outcomes and targets.

The Act will recognise the concept of Te Mana o te Taiao, which is an expression of the importance of maintaining the health of air, water, soil and ecosystems and their capacity to sustain life. This rearrangement of priorities is likely to be further solidified by plans prepared under the Strategic Planning Act.

Selwyn District Council can prepare for this possibly significant future change by prioritising the environmental performance of assets wherever possible.

Strategic Planning Act

This Act provides a strategic and long-term approach to how we plan for using land and the coastal marine area.

Long-term spatial strategies in each region would be developed to identify areas that:

- will be suitable for development
- need to be protected or improved
- will need new infrastructure and other social needs
- are vulnerable to climate change effects and natural hazards such as earthquakes.

The regional strategies would enable more efficient land and development markets to improve housing supply, affordability and choice, and climate change mitigation and adaptation.

The Strategic Planning Act will integrate functions under the RMA, Local Government Act 2002, Land Transport Management Act 2003 and the Climate Change Response Act 2002 to enable clearer and more efficient decision-making and investment.

Climate Change Adaptation Act

This Act would support New Zealand's response to the effects of climate change. It would address the complex legal and technical issues associated with managed retreat and funding and financing adaptation.

Managed retreat from coastal areas will addressed through this legislation.

6.3.4 Climate Change

Climate change action is being promulgated across a range of Legislation and Policy Statements. Along with the pending Climate Change Adaptation Act, the Climate Change Response (Zero Carbon) Amendment Act 2019 is key.

In 2019, the Government amended the Climate Change Response Act 2002 to enable decision makers to take New Zealand's net zero emissions by 2050 target into account. It is reasonably likely that the courts will find that the 2050 target, emissions budgets, and emissions reduction plans (once they are produced) are relevant to a range of central and local government decisions (and potentially a mandatory consideration in some cases).

Council's actions associated with Climate Change are discussed in section 6.5.

6.3.5 Water Management Reform

In preparing the Long Term Plan 2021-31, Council is fully cognisant that there is a potential significant impact arising from:

- *National Policy Statement on Freshwater Management legislation;*
- *Higher standards in respect to treatment of 3 Waters, mandated through the Water Services Bill;*
- *Reform of Three Waters Service Delivery.*

Considerable uncertainty exists as to how potential reform will impact on the ability of Council to plan, upgrade and deliver water services.

As the scale, scope and timing of any reform is unknown, and in particular if any new entity is Asset owning or Asset Managing, predictions are problematic.

The intention therefore is to prepare the Long Term Plan on the presumption of Status Quo, but to note that any significant change in the sector, will require a major amendment to the 2021-31 Long Term Plan.

6.3.5.1 3 Waters Reform

Central Government is driving reform of three waters service delivery nationwide.

Council engaged in the first phase of the reforms, through signing in August 2020 a non-binding Memorandum of Understanding (MoU) with the Government. Selwyn District Council has committed to sharing information on the district's 3 waters networks and services with the Government (administered through DIA) to participate in the first stage of the reform process. Council staff are actively engaged in providing information at both a regional and national level.

It is possible that, within the LTP timeframe, Selwyn District Council will no longer be responsible for the delivery of water, wastewater and stormwater services. These services are potentially going to be delivered by a larger entity, such as a statutory corporation similar to Scottish Water. Economic regulation is likely to be a part of this model. Assets may be vested in the new entity.

Land drainage and water races services are not affected by the reforms.

6.3.5.2 Water Services Bill

The Bill will introduce a new regulatory framework for drinking water supplies.

A new water regulator (Taumata Arowai) has been established to oversee the regulatory regime.

6.3.6 National Policy Statements

National Policy Statement for Urban Development

This provides direction to councils about when and how cities should plan for growth and how to do this well. It aims to remove unnecessary restrictions on development, to allow for growth 'up' and 'out' in locations that have good access to existing services and infrastructure. The final NPS for Urban Development came into effect in August 2020, replacing the NPS – Urban Development Capacity.

The NPS-UD is designed to improve the responsiveness and competitiveness of land and development markets. In particular, it requires local authorities to open up more development capacity, so more homes can be built in response to demand. The NPS-UD provides direction to make sure capacity is provided in accessible places, helping New Zealanders build homes in the places they want – close to jobs, community services, public transport, and other amenities our communities enjoy.

Most of the NPS-UD's provisions contribute to more competitive land markets in some form, but three are key.

- The intensification policies
- The responsive planning policy
- The removal of minimum parking rates in district plans

Tier 1 urban environments include Christchurch (Canterbury Regional Council, Christchurch City Council, Selwyn District Council and Waimakariri District Council)

National Policy Statement for Freshwater Management 2020

The National Policy Statement for Freshwater Management 2020 provides regional councils with updated direction on how they should manage freshwater under the Resource Management Act 1991 (RMA).

The fundamental focus of the National Policy Statement for Freshwater Management 2020 is that the management of all freshwater should give effect to the concept of Te Mana o te Wai.

Te Mana o te Wai refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. The concept seeks to restore and preserve the balance between water, the wider environment and the community.

Inherent to Te Mana o te Wai is a hierarchy of obligations in the statement that prioritises:

- First, the health and well-being of water bodies and freshwater ecosystems;
- Second, the health needs of people (e.g. drinking water);
- Third, the ability of people and communities to provide for their social, economic and cultural wellbeing.

This is a significant shift in priority, namely prioritising the health and well-being of water bodies and ecosystems above the health needs of people.

The National Policy Statement for Freshwater Management 2020 requires tangata whenua to be actively involved in freshwater management, including decision making processes, to identify and provide for Māori freshwater values. It also seeks to improve degraded water bodies, and maintain or improve all other water bodies.

The National Policy Statement for Freshwater Management 2020 includes new attributes which aim to provide for ecosystem health (such as sediment, dissolve oxygen, macroinvertebrates and fish index of biotic integrity), and more stringent national bottom lines for ammonia and nitrate toxicity. It also introduces two new compulsory values (threatened species and mahinga kai).

The National Policy Statement for Freshwater Management 2020 also specifies that territorial authorities must include objectives, policies, and methods in their district plans to promote positive effects, and avoid, remedy, or mitigate adverse effects (including cumulative effects), of urban development on the health and well-being of water bodies, freshwater ecosystems, and receiving environments.

This may require significant change to how Selwyn District Council deliver five waters services, including:

- Land drainage/waterways management
- Wastewater treatment & disposal
- Water abstraction
- Stormwater discharges

National Environmental Standards for Freshwater 2020

The National Environmental Standards for Freshwater 2020 regulates some activities that pose risks to the health of freshwater and freshwater ecosystems.

The National Environmental Standards for Freshwater 2020 provides standards for farming activities, including feedlots and stockholding areas, agricultural intensification, intensive winter grazing, and the application of synthetic nitrogen fertiliser to pastoral land.

In addition to providing standards for some farming activities, the National Environmental Standards for Freshwater 2020 provides standards for the following related freshwater activities:

- Natural wetlands
- Reclamation of rivers
- Passage of fish affected by structures (for new structures that did not exist at 2 September 2020)

Impact for Selwyn District Council:

- New culverts installed for stormwater and land drainage will have higher costs relating to fish passage and consenting
- May affect the ability to maintain or alter land drainage, water race or stormwater structures
- May affect any new subdivisions proposed for low-lying/historic wetland areas

6.4 Transportation - National and Regional Alignment

Government Policy Statement on Land Transport 2021

Government policy has substantially shifted in recent years towards efforts to reduce transport emissions and improve transport safety. The Government has signalled a desire to reduce both emissions and road fatalities to zero. This will be a particular challenge for transport assets and operations, given that transport is the largest contributor to greenhouse gas emissions in the Christchurch district; and more than one hundred people are killed or seriously injured on greater Christchurch roads each year.

Arataki is the Transport Agency's 10-year view of what is needed to deliver on the government's current priorities and long-term objectives for the land transport system. Arataki outlines the context for change, the step changes in existing responses that it believes are needed, and the levers the Transport Agency will use, in partnership with others, to shape change. It includes national, pan-regional and regional summaries.

Canterbury Regional Land Transport Plan

The Canterbury Regional Land Transport Plan (RLTP) is a combination of the programmes developed by the road controlling authorities in Canterbury, and is created to reflect both the problems and needs of the districts within Canterbury and the outcomes set out in the GPS. The Canterbury RLTP sets out to guide future investment and planning in the land transport system, and outlines the current state, the challenges, and the priorities for future investment.

The plan sets out:

- the context in which the transport system operates,
- the vision and strategic objectives for the transport system,
- the priorities for investment – key areas where further investment is required in order to achieve the vision and objectives, and
- A prioritised regional programme of transport activities.

Problem statements are established in the Canterbury RLTP, and an investment logic map used to show the benefits that are realised in addressing the problems, and how these problems and benefits align with the investment outcomes identified in the plan. The investment outcomes are prioritised in line with the GPS.

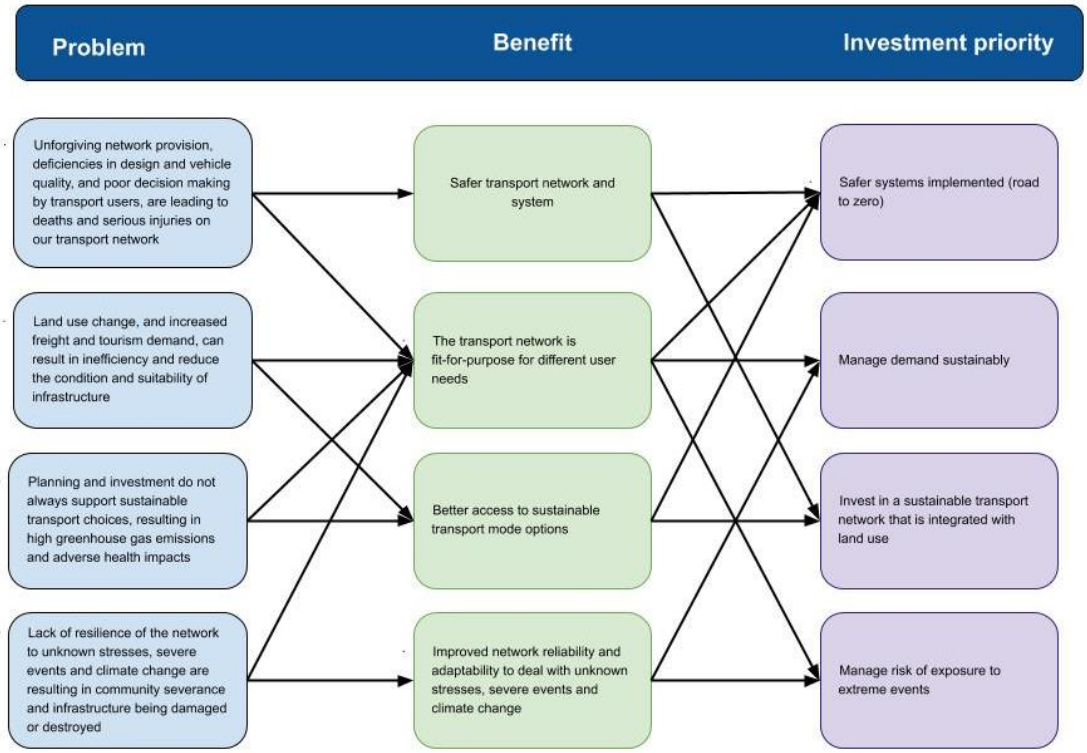


Figure 3: **Canterbury RLTP Investment Logic Map (Environment Canterbury)**

6.5 Climate Change

Climate change is considered as a critical consideration in the Council's long term planning. Selwyn District Council uses guidance from the New Zealand Government, based upon the best available climate science, to support the planning.

Advice from the Office of the Auditor General proposed:

- Councils need to be transparent with their communities about their current understanding of the risks posed by climate change effects and what this means for future decision-making – noting that their understanding will evolve over time.
- Councils need to acknowledge their information gaps, identify programmes to address these gaps – a particular focus should be on better understanding the performance and condition of their most critical assets.
- Councils need to think about the level of uncertainty in their assumptions and therefore how robust their financial forecasting is – and be transparent about this.
- Councils need to be having a comprehensive discussion of resilience and climate change issues with their community. This discussion needs to include financial and non-financial effects.

To avoid a rise in global warming of more than 1.5°C, global emissions need to fall by around 45 per cent from 2010 levels by 2030 (reaching net zero by around 2050). As a step in that direction, on 2 December 2020, NZ Parliament declared 'Climate Emergency' committing to urgent actions on reducing emissions.

The National Climate Change Risk Assessment for New Zealand was published by the Ministry for the Environment in August 2020. This is a key resource for planning Selwyn District Council's responses and mitigation of Climate Change impacts. Council has integrated the

climate change adaptation and mitigation planning process to the District's long term planning process.

Regional Coordination

The Canterbury Climate Change Working Party is coordinating planning and reposed at a regional level. The following points have been identified for planning guidance

Threats & opportunities:

Adaptation to climate change is something that our community needs to start planning for. Climate change will lead to threats to our built infrastructure and way of living but also opportunities that come through a warmer climate. A recent report from the Ministry for the Environment highlights climate changes already observed in many people's lifetime and the NIWA projections for Canterbury indicate significant changes in rainfall patterns, increased evapotranspiration and rising sea levels affecting infrastructure close to the coast. Adapting to these climate changes requires long-term planning to allow for changes in behaviour and infrastructure locations. This is not always negative; we also need to be planning for new opportunities from being able to grow food differently and new businesses as a result.

Programmes:

Through the Canterbury Mayoral Forum all Canterbury Councils have contributed to an initial climate change risk screening and this is being followed up with a more in-depth risk assessment (due June 2021). During 2020/21 there is a Canterbury-wide engagement programme running to raise awareness of climate change with our communities.

Local Coordination

In terms of mitigation (making a positive contribution), Council should identify what approach it intends to take (e.g. carbon footprint assessment and goal setting).

Acknowledging climate change adaptation action is not sufficient, Council will need to consider community engagement, adaptation options and mitigation actions.
Resilience is a key issue for Council and this is exacerbated by climate change, as both the likelihood and severity of extreme events are forecasted to increase.

Council's general position has been established prior to developing the 2021-31 Long Term Plan, leading the development of a Climate Change Policy and actions identified through the Long Term Plan. This is contained in the planning assumption around climate change:

It is assumed that climate change is happening and that this will impact on Selwyn District Council's roles and responsibilities, both from an emissions mitigation and climate change adaptation perspective.

Adapting to the challenges and opportunities of climate change is a significant issue for Council and it will take into account the predicted impacts of climate change as it plans, builds and renews its infrastructure. To achieve a coherent response to the impact of climate change on its infrastructure, Council has integrated the climate change adaptation and mitigation planning process to the District's long term planning process.

Climate change impact assessment is an iterative exercise and Council has been pursuing it actively ("Impact of Climate Cycles and Trends on Selwyn District Water Assets" -Aqualinc, 2016 and 2020)

The current assessments of climate change impact on Selwyn District Council's infrastructure and activities shows that there will be a low to minor impact within the period covered by the Long Term Plan.

(National Climate Change Risk Assessment)

As one of the earliest signatories of New Zealand Local Government Leaders' Climate Change Declaration 2017, the Council is committed to;

- Develop and implement ambitious action plans that reduce greenhouse gas emissions and support resilience within our own Council and for our local communities.
- Work towards improving the resource efficiency and health of homes, businesses and infrastructure in our district; and
- Work with its communities to understand, prepare for and respond to the physical impacts of Climate Change.
- Work with central government to deliver on national emission reduction targets and support resilience in our communities.

Climate Change Policy for Selwyn District Council

Council adopted a climate Change Policy in December 2020 as follows.

Climate Change response forms an integral part of the Council's decision-making process. This policy has been developed to encapsulate both the moral and legal responsibilities of the Council in relation to incorporating Climate Change response into its day to day business and the decision making for its communities and businesses.

To achieve a comprehensive Climate Change response at Selwyn District Council,

- *Council will align its activities to reduce carbon emissions across all its areas of influence to create the conditions for a smart, innovative, low-carbon economy that meet or exceed the targets set within the Climate Change Response (Zero Carbon) Amendment Act -2019.*
- *Council will carry out regular risk/opportunities assessment related to Climate Change and its impact/benefits to the Council's assets, businesses and its communities.*
- *Council will make Climate Change mitigation and adaptation a core component of its planning and decision making and mainstream it into the Council's function and activities.*
- *Council will provide consistent and timely information related to Climate Change across its key processes like long term financial planning, assets development and management, strategic planning, service delivery, emergency response, governance, communication, and other community engagement functions, and provide required resources to implement the actions planned to mitigate/adapt to the impacts, harvest the opportunities, and to increase long-term resilience to Climate Change.*
- *Council will engage with our Iwi (Te Rūnanga o Ngāi Tahu), the local hapū(s) and Tangata Whenua to exchange knowledge of Climate Change, develop understanding of Māori perspective in relation to climate risks/opportunities and collaborate on works related to Climate Change response and community resilience. This recognises the requirement to consult with Māori in relations to 'Te Tiriti O Waitangi'.*

- *Council will engage with its communities to increase awareness of Climate Change impacts and opportunities and lead the community resilience planning and Climate Change adaptation.*
- *Council will engage with the regional and national level authorities, Climate Change forums, workgroups and other stakeholders to actively contribute to the Climate Change related understanding and work, at the local, regional and national level.*

Climate Change

The Earth's atmosphere is made up of oxygen, a large amount of nitrogen, and a small percentage of so-called 'greenhouse gases' (GHGs) such as carbon dioxide (CO2) and methane (CH4).

GHGs act like a blanket around the Earth. They trap warmth from the sun and make life possible. Without them, too much heat would escape and the surface of the planet would freeze. However, increases in the volume and concentration of emissions have caused the Earth to heat more and its climate to change.

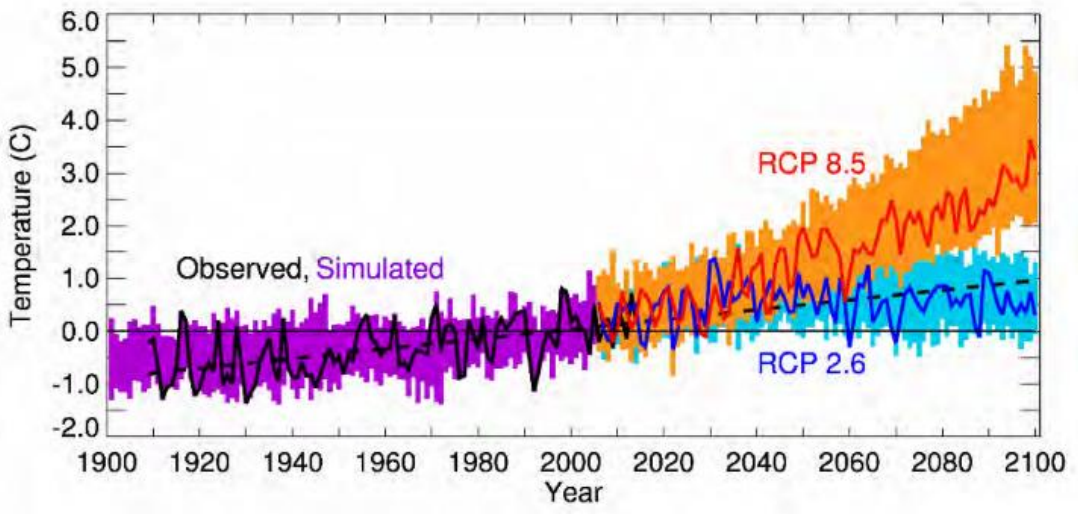
This process is often called global warming but it's better to think of it as Climate Change. This is because while warming is the main effect, other aspects of the climate also change including more frequent extreme events such as floods, storms, cyclones, and droughts.

Projected Impact on Climate Change on 5 Waters Activities

Selwyn District Council commissioned a study from Aqualinc Research Ltd ("Impact of Climate Cycles and Trends on Selwyn District Water Assets", 2016) to assess the impact of climate trends and cycles on the district's five water assets, from the present day to 2050.

The environmental factors that were identified as having the greatest impact were:

- Groundwater levels
- Annual rainfall
- Extreme rainfall
- Alpine and foothill river flows (floods and low flows)
- Evapotranspiration
- Sea level rise



From Climate change projections for the Canterbury Region Prepared for Environment Canterbury (NIWA, February 2020)

Climate change will likely have a minor impact on most aspects of Selwyn District Council's five water services over the next 30 years. The key impacts identified were:

Water	Higher evapotranspiration may mean 1-2% higher peak water demands. Higher alpine flood flows may have some impact on Arthurs Pass, Castle Hill and Lake Coleridge water supply intakes.
Wastewater	Higher alpine rainfall and flood flows may result in an increase in stormwater inflows for the Arthurs Pass, Castle Hill and Lake Coleridge wastewater systems. An increase in sea level of up to 0.28 m may have an impact on Upper Selwyn Huts and Rakaia Huts wastewater systems.
Stormwater	Higher alpine rainfall and flood flows may result in an increased occurrence of surface flooding at Arthurs Pass, Castle Hill and Lake Coleridge. An increase in sea level of up to 0.28 m may have a minor impact on stormwater drainage systems at Rakaia Huts.
Land Drainage	An increase in sea level of up to 0.28 m may impact on Lake Ellesmere/Te Waihora levels and parts of the land drainage network. A projected 6-8% increase in flood flows may impact on Arthurs Pass Bealey River flood protection systems.
Water Races	An increase in alpine flood flows could result in a small increase in flood damage to intakes. Conversely higher alpine flows would improve reliability of supply. A potential minor reduction in flows in the Kowai River might have a small impact on reliability.

Projected Impact on other Activities

Canterbury's climate is changing, and these changes are highly likely to continue for the foreseeable future. It is internationally accepted that human greenhouse gas emissions are the dominant cause of recent global climate change, and that further changes will result from increasing amounts of greenhouse gases in the atmosphere. The rate of future climate change depends on how fast greenhouse gas concentrations increase.

Environment Canterbury commissioned NIWA to analyse projected climate changes for the Canterbury Region. This report addresses expected changes for various climate variables out to 2100, drawing heavily on climate model simulations from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report. In addition, hydrological and sea-level rise impacts of climate change were assessed. The following bullet points outline some key findings of this report

- The projected Canterbury temperature changes increase with time and increasing greenhouse gas concentrations. Future annual average warming spans a wide range: 0.5-1.5°C by 2040, and 0.5-3.5°C by 2090.
- The average number of hot days (days ≥25°C) is expected to increase with time and emission scenario. (summarised):
- Projected changes in rainfall show variability across the Canterbury region. Small changes to annual rainfall of ±5% are projected for most of the region by 2040 and 2090. Seasonally the largest increases are projected during winter, with 15-40% more

rainfall projected in many eastern, western and southern parts (by 2090 under RCP8.5).
- The future amount of accumulated PED (Potential Evapotranspiration Deficit) is projected to increase across most of Canterbury, therefore drought potential is projected to increase.
- Mean annual low flow generally decreases by late century, with decreases exceeding 20% in many areas of the region.
- Floods (characterised by the Mean Annual Flood; MAF) are expected to become larger for many parts of Canterbury, with some increases exceeding 100%.
- Sea-level rise will continually lift the base mean sea level on which the tide rides, which means there will be an increasing percentage of normal high tides which exceed a given present-day elevation

National Climate Change Risk Assessment (NIWA, August 2020)

The report identifies New Zealand's 10 most significant climate change risks, based on urgency

Domain	Risk	Rating	
		Consequence	Urgency (44–94)
Natural environment	Risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea-level rise and extreme weather events.	Major	78
	Risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.	Major	73
Human	Risks to social cohesion and community wellbeing from displacement of individuals, families and communities due to climate change impacts.	Extreme	88
	Risks of exacerbating existing inequities and creating new and additional inequities due to differential distribution of climate change impacts.	Extreme	85
Economy	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	Extreme	90
	Risks to the financial system from instability due to extreme weather events and ongoing, gradual changes.	Major	83
Built environment	Risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise.	Extreme	93
	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise.	Extreme	90
Governance	Risk of maladaptation[1] across all domains due to practices, processes and tools that do not account for uncertainty and change over long timeframes.	Extreme	83
	Risk that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for adaptation. Institutional arrangements include legislative and decision-making frameworks, coordination within and across levels of government, and funding mechanisms.	Extreme	80

These are all of relevance to Selwyn, with a particular concern on water security and availability.

6.6 Environmental Impacts, sustainability and Compliance requirements

Increased requirements in maintaining environmental compliance for Council's infrastructure activities remain a significant challenge. As existing consents expire and new facilities are developed, new consents – and the associated planning and infrastructure costs - are required to meet the demands of growing populations. Council is required to implement a 'sustainable development' approach, and this is part of Councils planning philosophy. Sustainability principles have been developed and are a core consideration in infrastructure and strategic planning.

The 5 Waters activities are mutually interdependent, and the Council will provide the extent and quality of service demanded by the community and legislation. This involves prudently managing the acquisition, maintenance, operation, renewal and disposal of water assets in ways that optimise the value of services delivered to the community.

Testing and monitoring regimes will need to increase to achieve the outcomes sought through the National Policy Statements and Standards, as well as Regional Council rules associated with activities.

6.7 Infrastructure Resilience

Planning for the long terms means taking risks seriously. The likelihood and consequence of an occurrence of natural hazards and other risks over a thirty year term brings such events into focus. Those to be considered include:

- Earthquake (e.g. AF8 and others)
- Fire
- Flood
- Wind

Loss of service of core infrastructure (e.g. arterial road bridge) would affect the wellbeing of residents and visitors. A structured approach is needed to make progressive improvements that represent long term solutions

Council adopted the following assumption in terms natural hazards and events.

Lifecycle - No major adverse events:

"It assumed that there will be no major impact from adverse events during the period covered by the Long Term Plan, for example, earthquake, pandemic or flood. While events may occur at any time, Council's planning will focus on operational resilience and Emergency Management."

There is a risk that a major adverse event will occur and result in damage to assets and additional costs to the Council.

Any major adverse event will have a significant impact on the Council and the community. The Council seeks to mitigate this risk through its Civil Defence, Risk Management, Insurance Policies and access to emergency reinstatement funding available from the NZ Transport Agency for roading works.

This assumption has been updated to reflect the COVID-19 fallout, and reflects the assumption that there will be no major impact on the Council as a result of COVID19. Council is not planning for any other major adverse events but will continue to build infrastructure with appropriate resilience, imply planning controls and manage its Civil Defence and Emergency Management preparedness to a high level.

Customers have a high expectation of continuing functionality and service delivery. Resilience is based on a design philosophy which acknowledges that failure will occur. Resilience requires early detection and recovery, but not necessarily through re-establishing the failed system.

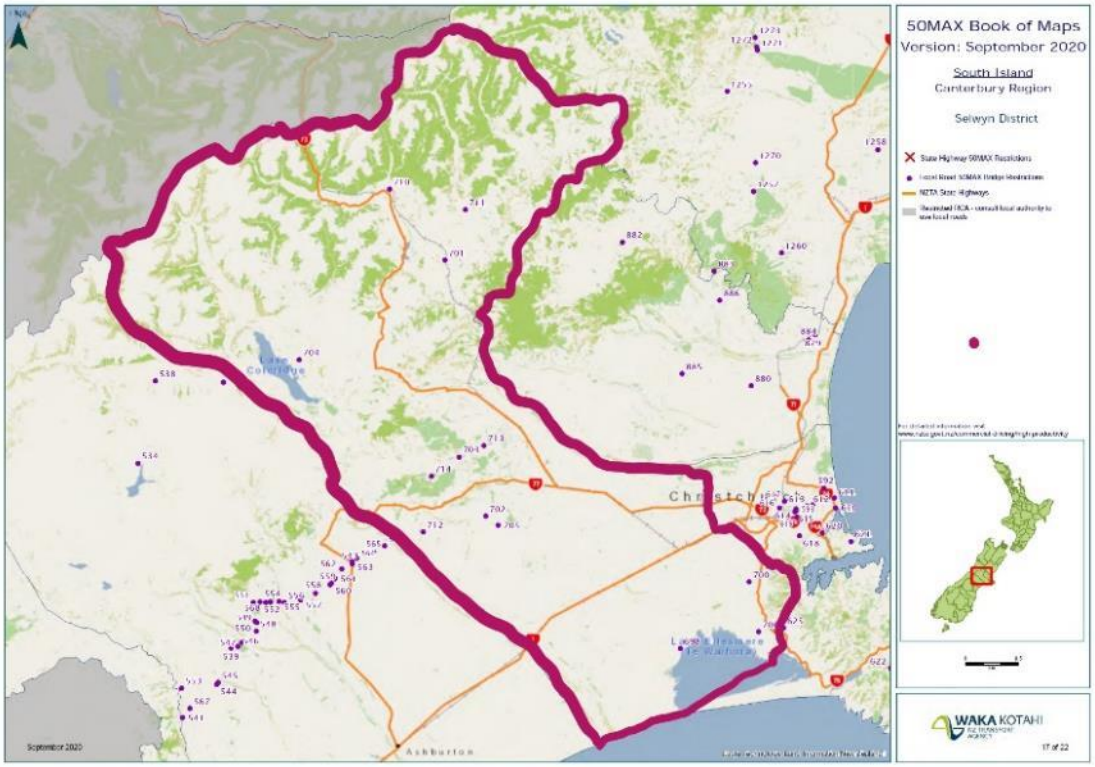
Council considers the management and mitigation of the risks to, and the resilience of, the community's infrastructure assets from natural disasters. This is achieved by establishing the requirements for resilient transport and lifeline utilities networks.

Districts greatest threats are earthquake, flooding and storms. Alpine Fault earthquake magnitude 8 (AF8) is a regional/national programme to prepare for a significant quake. Council and the Canterbury Civil Defence and Emergency Management (CDEM) Group is actively involved in the initiative.

6.7.1 Transportation Critical Assets and Lifelines

Selwyn is a vast district with a roading network coverage that is relatively sparse outside the peri-urban centres. In these settings, the management of critical connections is vitally important. There is sufficient redundancy on many parts of the network, while options elsewhere are limited.

In the rural settings the criticality of assets is related to their function as critical links. These assets may be routes that serve as the primary connections to or between rural townships, or critical bridges that serve as the only river crossing points. Telegraph Road, Leeston Road, Old West Coast Road, and Ellesmere Junction Road are critically important as they serve as the most direct links between townships in the wider district. Telegraph Road is particularly important for its ability to link the Synlait and Fonterra plants with the wider agricultural operations of the district. The Waimakariri Gorge Road Bridge provides one of very few opportunities to directly cross the Waimakariri River, and Bealey Road provides a critical crossing over the Selwyn River. Reliable provision for heavy traffic (particularly HPMVs) is key to supporting economic activity such as dairy. The network of bridges has been assessed to ensure the network performs adequately when there are disruptions such as flooding and vehicle crashes. *Figure **4*** shows the bridges within the district which have restrictions preventing



trucks with 50MAX configurations, these restrictions place further pressure on the rural critical assets as there are fewer alternatives for the largest and most destructive traffic on the network.

There are other routes that are identified as critical due to the sheer volume of traffic. These routes connect the townships of Rolleston, Lincoln, and Prebbleton to one another and to Christchurch city. While some of the travel patterns are changing with the completion of CSM2, several of the Rolleston-Lincoln-Christchurch routes are regarded as critical. A formal criticality assessment is not complete at this stage, it will be completed once a better understanding of CSM2 traffic patterns are understood. Currently the peri-urban critical assets include Jones Road, Lincoln Rolleston Road, Springston Rolleston Road, Selwyn Road, Springs Road and Shands Road.

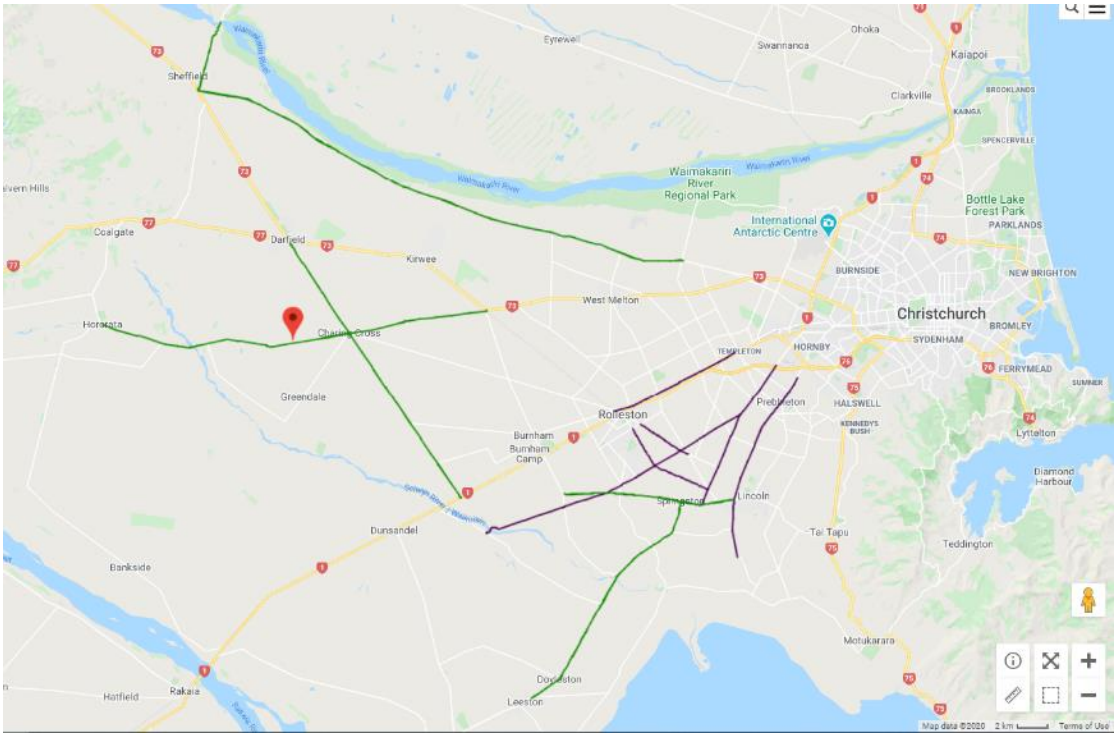


Figure 5: Critical assets. Urban connections are shown in purple and rural connections are shown in green (RAMM)

6.7.2 5Waters Critical Assets and Community Facilities Critical Assets

The asset criticality model is built on 8 factors that are scored. These scores are then classified into a criticality description (Low, Medium-Low, Medium, Medium-High and High).

The exception is the 'CDEM Function' factor. When an asset has any non-zero score for that factor, then it is classified as Critical. Having a CDEM function is the only way for an asset to be classified as critical.

These factors are as follows:

1. *CDEM Function: Asset will be used for Civil Defence purposes.*
2. *Environmental: Failure of the asset has an environmental impact.*
3. *Reputation: Failure of the asset results in a loss of reputation for SDC.*
4. *Loss of Income: Failure of the asset results in a loss of income for SDC.*
5. *Health & Safety: Failure of the asset has an impact on the health & safety of its users.*
6. *Loss of Service: Failure of the asset results in a loss of service to its users.*
7. *Cost: Failure of the asset has a cost impact on SDC.*
8. *Legal: Failure of the asset has a legal impact for SDC.*

In general, failure of the highest criticality assets could be expected to have severe adverse impacts on SDC's customers and stakeholders, affecting outcomes such as public health and safety, economic wellbeing, and environmental sustainability. Availability of suitable alternatives is limited. At the other end of the scale, failure of the lowest level of criticality would have little to no adverse impacts on customers, the local economy or the environment.

Managing 5Waters Critical Assets

The failure of a critical asset suggests that maintenance, refurbishment or asset renewal should be carried out at an earlier stage in the asset lifecycle than would be the case for a non-critical asset. Typically, the risk of asset failure increases as its condition deteriorates, so for a critical asset the intervention should be programmed before the condition reaches a pre-determined threshold in order to minimise the risk of asset failure.

For non-critical assets, where the consequence of failure is minimal, a possible asset management strategy is to allow the asset to "run to failure". For example a non-essential pump which can easily and quickly be replaced without disrupting the service provided to customers can be left to replaced when it fails to operate

The integration of criticality into the day to day operation and management of the 5Waters is an integral part of the 5Waters strategy with the following:

- *Criticality assessments of assets within the 5Waters allows all staff involved in the management, administration and operation of the services to have the ability to ascertain via GIS, AMS or handhelds the location and relevant details of critical assets;*
- *Priority will be given to ensuring that data confidence ratings for high criticality assets are high;*
- *Priority will also be given to managing the assets better. The Maintenance Contract C1170 Variation (June 2014) includes requirements for inspection of assets that vary with criticality for facilities, mains, hydrants, air valves, manholes etc. Inspections will also improve data confidence in the quality of asset data;*
- *Renewal strategy that facilitates the renewal of critical assets in a proactive manner;*
- *Condition assessments will be dependent on asset criticality and the percentage of life expectancy still attributed to the asset; and*
- *Workshops for operational staff on the background and requirements of criticality*

Managing Community Facilities Critical Assets

The criticality identification process also enables the development of targeted maintenance and condition inspection programmes based on overall criticality

Application of Criticality Rating		
Criticality Rating	**Maintenance Inspections**	**Condition Inspections**
High	At least monthly	Annually
Medium-High	At least quarterly	Annually
Medium	At least annually	Every 3 years
Medium-Low	At least biennially	Every 3 years
Low	At least triennially	Every 3 years

6.8 Aging infrastructure

The infrastructure is aging and the district is approaching an important period to ensure that its infrastructure assets continue to meet the needs of the community in the future.

Selwyn District Council apply a 'just in time' philosophy and defer renewals through pro-active maintenance measures. While much of the infrastructure in Selwyn district is relatively new, there is infrastructure in older townships that requires attentions. Council needs to balance this with meeting the needs of growth.

Currently Council prepares a renewal programme for infrastructural assets for thirty years in the respective Activity Management Plan. This is compared to the depreciation calculation for the valued assets to verify the appropriateness of the renewal programme.

Along with older infrastructure, Council's portfolio is increasing quickly with development. Council is aware of this as a future renewal issue

Council has developed comprehensive renewal plans based on asset condition, performance and models of those results. For 5Waters, renewal profiles of up the 120 years have been developed to fully understand the assets and the investment that will be required.

Transportation assets require considerable investment in renewal (resurfacing and rehabilitation) as these lifecycles are shorter than other infrastructure. Deterioration modelling is undertaken to project what programmes will be required to deliver the appropriate level of service in the most cost effective manner.

Community facilities assets are regularly surveyed to ascertain their condition and if the performance is fit for purpose. It is also important with these facilities to understand the community's opinion on how their expectations are met and if the facilities are a satisfactory match.

6.9 Economic Activity

Selwyn District has been economically buoyant for a long period of time. Activity in the district is becoming more diversified over time. The construction sector is a key part of that activity.

Discussion on the impact of COVID-19 is included in section 6.13.

Growth, particularly residential housing is the key issue for Council to respond to and manage prudently. The following comment from Infometrics (November 2020) suggests this housing demand remains strong with steady supply available.

Housing market slow and steady
One of the most unexpected aspects of the COVID-19 recession has been the resilience of the New Zealand housing market. Nationally, this has meant strong house price growth. However, in Selwyn, housing market resilience has supported strong growth in new house construction while house prices have grown only modestly.

Over the year to September 2020, house prices in the District increased by 2.0%, well behind the 10.1% rise nationally. The number of houses sold in Selwyn grew by 16.1%, compared to 1.1% nationally.

6.10 Affordability

Affordability is a key issue for residents and businesses in Selwyn District. Affordability and Council's funding model have a significant impact on housing affordability. The components for affordability are robust forward planning, efficient and effective service delivery, and ensuring the costs associated with growth are borne fairly.

This is discussed further in the financial strategy

6.11 Tourism

Tourism is a significant industry supported and encouraged by the Council. Tourist numbers have continued to grow nationally and within the Canterbury region. The growing trend to independent travellers has become more common in recent years.

A number of the small settlements such as Arthurs Pass, Rakaia, Castle Hill, and Lake Coleridge are popular places for holiday homes and recreational facilities. Arthurs Pass, Darfield and Springfield in particular support summer and winter-sports in the Craigieburn Basin, Arthurs Pass National Park, Lake Coleridge, the Rakaia Basin and Mt Hutt. These settlements also service long-distance traffic and provide tourist facilities on main tourist routes.

Route 72, the Inland Scenic Route provides an inter-district connection between tourism and recreational facilities in Selwyn and those in the adjoining Ashburton and Waimakariri Districts and beyond to the Mackenzie Basin / Mt Cook and Hanmer Springs / Kaikoura. It offers an increasingly attractive, and some times more direct, alternative to the utilitarian State Highway 1. These tourist facilities are supplemented by the major golf course and other recreational and visitor facilities at Terrace Downs.

6.12 Progressing Capital Projects

With rapid growth and large infrastructure projects in Selwyn and Greater Christchurch, work programmes need to be managed well. Council has established a Procurement Strategy for the Infrastructure Group which assess the supplier market and provides a framework for procurement processes.

There are financial and levels of service impacts from not completing projects as planned, and project management requires adequate resources to facilitate the programme.

Council has adopted the following assumption:

Financial - Timing and level of capital expenditure:

The Long Term Plan assumes that the timing and cost of capital projects and associated operating costs are as determined through the Council's activity management planning process.

There is a risk that capital projects may not occur as planned. This may have an impact on the costs of the respective project. There is also the risk that actual project costs will vary from those forecast. Transport projects seeking subsidy will need to be developed through a Business Case approach relative to the scale of the project to NZTA which may change originally anticipated outcomes.

If projects do not occur as planned, capital expenditure in any year may differ from that forecast and delay may also change the cost of individual projects. The Council will consider the impact of any change as part of the annual budget process and consider the funding implications of any cost changes.

This assumption discussed Council's ability to actually fund and implement works as envisaged. Changes are likely to occur that will affect the timing, nature and cost of proposals. While some projects may be relatively straight-forward, completion could be affected by resource consents or similar processes.

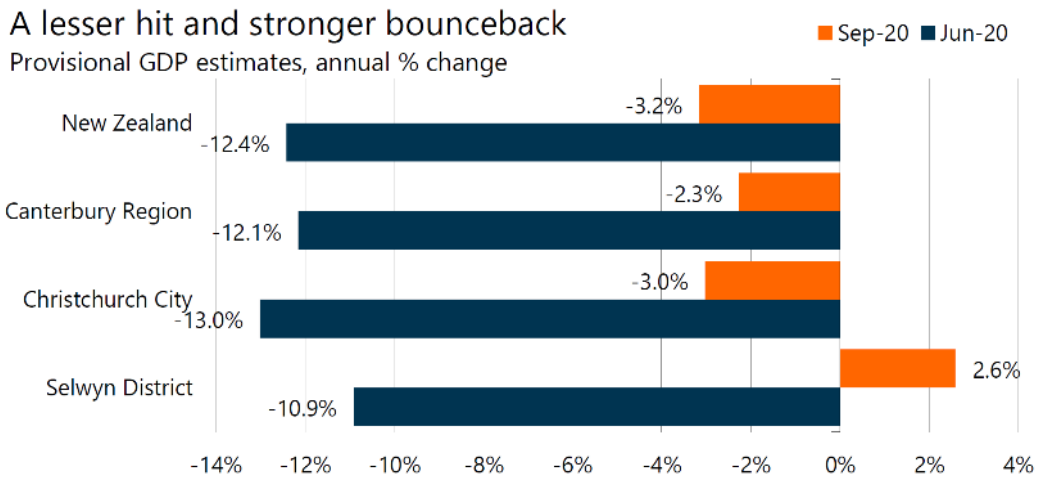
6.13 Impacts of COVID-19

It is particularly difficult to interpret the immediate and long term impacts of the COVID-19 Pandemic. Even after the effects reduce, there is the risk of a similar event. Infometrics have provided Selwyn District Council with an overview of the Economic impacts of the COVID-19 pandemic on the Selwyn District which has been considered by Activity Managers in developing options and programmes.

Economic Impacts of COVID-19 on the Selwyn District – Revised Estimates for Selwyn District Council (Infometrics, November 2020)

The COVID-19 pandemic brought about the sharpest decline in economic activity in history. Nationally, GDP in the June 2020 quarter declined by 12.4% compared to the June 2019 quarter.

In Selwyn, GDP in the June 2020 quarter is estimated to have declined by 10.9% compared to the June 2019 quarter. In the September 2020 quarter, as the country moved to COVID-19 Alert Level 1 and activity in most industries resumed, the District's economy rebounded, ending up 2.6% larger than in the September 2019 quarter.



Contrary to initial expectations, Selwyn appears to have created more jobs than have been lost over the year to September 2020, with a net increase in filled jobs in the District of 2.3% or 640 jobs. This figure is somewhat at odds with the increase in Jobseeker Support and COVID Income Relief Payment (CIRP) benefit recipients. Over the year to October 2020, the combined number of Jobseeker and CIRP recipients in Selwyn increased by 117%, reaching a high of 1,179 individuals in August 2020.

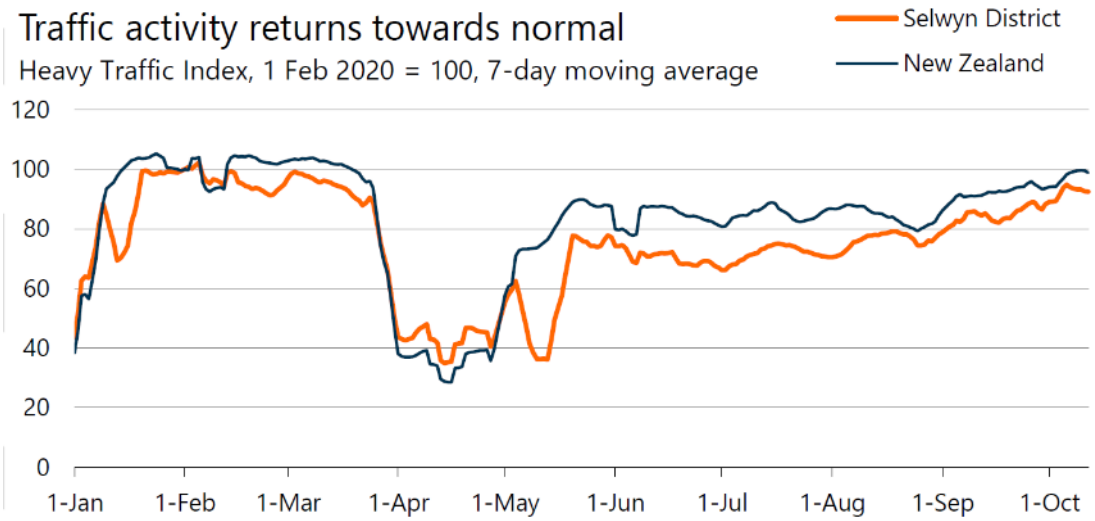
We expect approximately 100 jobs to be lost in Selwyn by March 2021, and a further 1,100 by March 2022. Job losses will push the unemployment rate to 3.7% from its current rate of 2.3% - still well below the national average.

Around $92m in earnings is expected to be lost due to job losses in Selwyn over the two years to March 2022.

Selwyn's construction sector is operating at record levels at present, however, we expect workloads to start easing in 2021, contributing to the bulk of job losses in the district.

Traffic flows yet to return to normal

Traffic flows in Selwyn have are still below normal levels since lockdown. According to NZTA Data, traffic flows since February have been lower than the corresponding months in 2019. Infometrics heavy traffic index is based on NZTA monitoring sites in Springfield and Dunsandel. Heavy traffic between Selwyn and Christchurch may well have increased over this period.



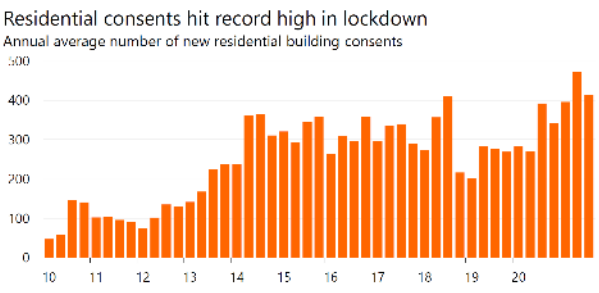
For the year to September 2020, traffic flows in Selwyn declined by 11.7%, compared to a decrease of 10.5% across New Zealand.

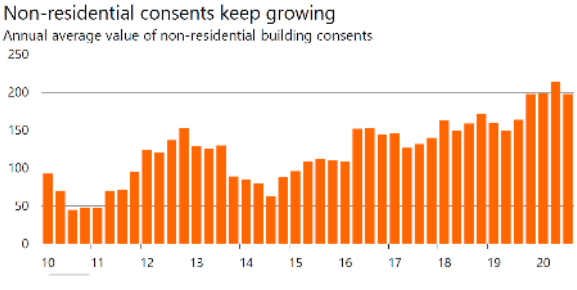
Construction activity remains very strong

Construction activity in Selwyn has been booming since the 2010-11 earthquakes, and remains strong even after the June 2020 quarter lockdown.

The number of residential building consents issued in Selwyn has grown strongly over the past decade, with strong growth recorded over 2012-14, and reaching record highs in the June and September 2020 quarters.

Non-residential construction in the district has been strong too, albeit growing slower than residential construction.

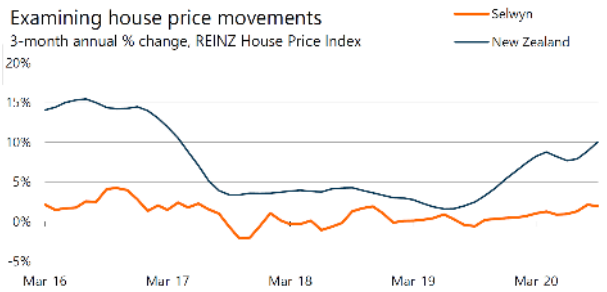




(x-axis shows quarterly activity)

Housing market slow and steady

One of the most unexpected aspects of the COVID-19 recession has been the resilience of the New Zealand housing market. Nationally, this has meant strong house price growth. However, in Selwyn, housing market resilience has supported strong growth in new house construction while house prices have grown only modestly.



Over the year to September 2020, house prices in the District increased by 2.0%, well behind the 10.1% rise nationally. The number of houses sold in Selwyn grew by 16.1%, compared to 1.1% nationally.

Austerity is a non-starter

The 2008 Global Financial Crisis provided some stark lessons regarding the negative consequences that can arise from increased austerity on the part of central and local governments, in the face of declining employment and earnings. Thus far, New Zealand's approach to the COVID-19 recession suggests that these lessons have been absorbed. Government spending on direct support measures such as the wage subsidy and CIRP has proven effective in minimising some of the worst effects of the recession. More indirect measures such as the Funding for Lending Programme are likely to rein in the cost of private sector debt, despite contributing to rising house prices.
In this environment, we would reiterate the need for local governments to, wherever possible, continue providing impetus to local economic activity through their planned operational and capital expenditure programmes.

We also maintain that a balanced approach between rates increases and the maintenance of services on the one hand, and consideration of increasing financial stress in the community on the other, will provide the best chance for Councils and their communities to recover from the recession.

Wellbeing will come back into focus

As local economies begin to recover from the COVID-19 recession, issues of community wellbeing are likely to reappear on the radar of national and local government. The mental health toll of the Level 3 and 4 lockdowns, as well as of job losses, reduced earnings, business closures and reduced future employment opportunities is yet to become clearly visible in our communities. Similarly, declining housing and rental affordability is likely to result in negative wellbeing outcomes in almost all regions.

We therefore foresee a need for central and local government, DHBs and their community development partners, to allocate resources towards effectively addressing these and other wellbeing issues, that are likely to emerge or be worsened as a result of COVID-19.

COVID-19[1]

In the wake of the COVID-19 pandemic, economies across the country are expecting to slow. The New Zealand economy is forecast to shrink by 4.1% this fiscal year (to March 2021) with unemployment reaching 8.5% by March 2022. The Selwyn economy is expected to weather the impact slightly more optimistically than the national average, forecasting only a 0.9% contraction in the economy and a 3.7% unemployment rate (from 2.3% currently) in the same periods.

[1] *Economic Impacts of COVID-19 on the Selwyn District – Revised Estimates*, Infometrics, November 2020

This slightly more positive outlook can be attributed in part to the resilience afforded by the diversity of the Selwyn economy. Exports of food products remain strong with meat, fruit, and dairy export volumes all up on 2019 levels. Selwyn's largest industry is the agricultural forestry and fishing sector. Continued primary export strength is likely to support the district's economy. The strength of the dairy sector in the district further bolsters the district's position, as food production is continuing at a similar rate.

Selwyn's relative resilience can also be attributed to the comparatively low exposure to international tourism. In 2019, tourism contributed around 2% to the District's GDP. Only 32% of the normal tourism spend in the district is from foreign tourists, and domestic tourism spending is expected to hold up much better than international.

The construction sector will take the largest hit of the industries in Selwyn, with a forecast decline of 25% as a percentage of GDP between 2020 and 2022. Increases in unemployment across construction industries are still forecast, but the previous forecasts of house prices falling have defied expectations. In August's forecasting, the percentage drop in the construction sector was 36% and 47% for non-residential and residential activity. November's forecasts put these reductions at 22% and 3% respectively.

A combination of (relatively) affordable property prices, high quality communications infrastructure and reasonable travel connectivity to major centres, is likely to provide regions with a competitive advantage in attracting domestic migrants, or the much-discussed and seemingly growing group of returning New Zealanders.

Initiatives such as the New Zealand Upgrade Programme, along with central government financial support for regional infrastructure development projects, will play a key role in stimulating the recovery of local economies. Councils will need to collaborate with their local construction industries, to accelerate to implementation of infrastructure development programmes, and ensure optimum allocation of available resources across different projects and different construction types.

In the residential construction sector, we see opportunities for local government interventions on the supply side of the housing market, for example through increasing the availability of land for residential construction, consenting residential development and providing the necessary infrastructure. These processes will once again need to be planned and implemented in collaboration with relevant stakeholders such as local property developers, and local residential and non-residential construction firms.

The financial impacts of COVID-19 in the district, while less than some other areas of New Zealand, will none the less also tighten budgets in Selwyn for at least the next year or two. It is likely that these reductions to Selwyn's economy will reduce the Council's revenue and in the wake of this, it becomes vitally important to ensure investments are targeted to return maximum value.

6.14 New Technologies

New technologies affect the community at large as well as the manner in which Council provides services.

The new technologies that Council expects that will have an impact on service delivery include:

- Communications – high speed broadband, mobile communications and data acquisition and control techniques
- Level of service creep – customer expectations for services and the format in which they are delivered will require ongoing monitoring and response
- Changing transportation patterns including modal shift, 'smart' vehicles along with alternative fuel use (especially electric) and transportation funding

Looking out beyond ten years there are disruptive technologies that we anticipate will come to fruition. Smart homes and vehicles are becoming commonplace. If realised, some of these will have a significant impact.

- Autonomous vehicles – the introduction self-drive cars and trucks. This will change the requirements for traffic services in particular (signage and markings) as well as the way road works are undertaken.
- Transport as a service – the need to own one or more vehicles is likely to change when transport can be purchased as a service. This could become quite common with ride sharing and commuting. This is on note as Selwyn has one of the highest vehicle rates per household in New Zealand
- More virtual meetings and high-speed communications should reduce the need for travel; school and universities along with workplaces and social meetings would be more flexible and traffic congestion should reduce as 'rush hour' is less of an issue
- Residents and businesses may choose to become more self-sufficient in terms of energy production (e.g. solar and wind power). This would be typical of more self-responsibility actions and interaction with the environment.
- Wastewater treatment at source – while reticulated wastewater systems with centralised treatment have been the preferred method for over a century, there is a potential to move to new decentralised technology. While such systems are not feasible at this stage, it is quite possible this will occur within thirty years.
- Water will be regarded differently to today. If groundwater quality and quantity declines, and climate change causes droughts and storms, planning and management of the water resource can be expected to be more deliberate and regulated. Council may not be able to source water as easily as it currently does; and more controls on use (and wastage) are likely.

6.15 Rates & Charging Mechanisms

With a large number of water and wastewater schemes with different characteristics - along with community facilities that serving a wide range of the population - standardising rates, fees and charges is favoured. This enables implementation of infrastructural programmes differently as there is a broader base from which to programme expenditure and to support smaller communities. The details of the charging methodology are described in the financial strategy.

Selwyn District must carefully manage its investment in infrastructure to ensure it gets value for every dollar and provide infrastructure in a lawful, functional and affordable manner.

7.0 THIRTY YEAR STRATEGY

In its role as Local Authority Selwyn District Council will comply with the relevant New Zealand legislation, while the following Strategic Statements will guide decision-making over the next 30 years. These statements have been developed through Council workshops and derived from Council's Outcome Statements and Draft Long Term Plan

7.1 Applying the Strategic Statements to Infrastructure Planning

A clean environment – air, land, water and general environment to be kept in a healthy condition.

To support this strategic statement the Council will:

- Advocate to ensure organisations responsible for protecting the environment have appropriate policies and strategies to achieve this outcome
- Provide water and sewerage systems that minimise the negative effects of their activity
- Provide a service to collect and dispose of solid waste in a manner that minimises any potential harm to people and to the environment
- Ensure services are available for the effective and affordable collection, processing and marketing or beneficial use of diverted materials

The water and wastewater activities make key contributions to the achievement of these objectives.

A healthy community – Selwyn people have access to appropriate health, social and community services.

To support this strategic statement:

- Advocate to ensure appropriate health and social services are accessible to Selwyn residents
- Facilitate and provide opportunities for Selwyn residents to enjoy healthy, active lifestyles including provision of recreational open space and community facilities

The water and wastewater activities make key contributions to the achievement of these objectives.

A safe place in which to live, work and play – we are safe at home and in the community.

To support this strategic statement:

- Encourage neighbourhood support and other community support groups
- Ensure that all buildings constructed in the District are safe, durable, accessible and fit for their intended purpose
- Promote walking and cycling as a safe, viable mode of transport and recreation
- Encourage and support volunteer's involvement with safety initiatives
- Provide and maintain a Civil Defence Emergency Organisation and a Rural Fire Organisation
- Encourage and support community involvement in emergency management
- Maintain, operate and upgrade the transportation network and work with key stakeholders and the community to reduce fatal and injury crashes
- Provide/facilitate safe entertainment/recreation activities for young people

The transportation and community facilities activities make key contributions to the achievement of these objectives.

An educated community – our District provides a range of quality, lifelong education and training opportunities.

To support this strategic statement:

- Advocate for improvements to educational opportunities within the District
- Provide lifelong learning opportunities through its Libraries

The community facilities activity makes key contributions to the achievement of these objectives.

An accessible district – effective and accessible transport system

To support this strategic statement:

- Provide a well-maintained, operated and affordable land transport system
- Advocate for improvements to state highways (NZ Transport Agency) and public transport services (ECan) where community concerns are raised

The transportation activity makes key contributions to the achievement of these objectives.

A community which values its culture and heritage – our District provides a range of arts and cultural experiences and facilities, and our heritage is preserved and shared

To support this strategic statement:

- Provide information, recreational, cultural and learning opportunities through its network and Libraries
- Provide support to local arts and cultural organisations
- Provide support to the Canterbury Museum Trust
- Recognise and protect sites, buildings and significant trees with cultural or heritage values
- Work with Te Taumutu Rununga to ensure our commitments to the Treaty of Waitangi are met

The community facilities activity makes key contributions to the achievement of these objectives.

The organisations priorities are discussed in section 3.1

7.2 Asset and Service Management Strategy

In providing services to residents and visitors through the use of infrastructural assets, the Council's Asset and Service Management Strategy is to:

- maintain the existing networks (including 'routine' renewals)
- implement upgrades required to meet legislative and regulatory compliance
- undertake asset renewals through coordinated programmes
- consider the level of demand for services and plan infrastructure response accordingly
- ensure vested assets are appropriate and of the standard required

This approach recognises the relatively new assets that comprise Selwyn's networks, and that the proportion of assets requiring renewal in the near future is relatively small.

The performance of assets is generally satisfactory and maintaining these is the priority so that services to the community are not compromised. Monitoring the condition and performance of assets remains important while the emphasis is on responding to growth, to ensure that assets are not deteriorating prematurely and renewal plans remain appropriate.

Level of Asset Management Planning

Council has established an asset management policy. This defines the appropriate level of asset management planning in line with the discussion contained in the International Infrastructure Management Manual (2015). The policy definitions were reviewed early in 2021 and are as follows:

Water	Intermediate
Sewerage	Intermediate
Stormwater	Core
Transportation (Roads & Footpaths)	Intermediate
Other Infrastructure	Core

In order to manage infrastructural assets that support the wellbeing of the district it is essential that there is a logical system of good asset management practice. This includes inventory, asset condition, performance required and performance delivered, and risks that affect service delivery records.

7.3 Sustainable Service Delivery

7.3.1 Response to Four Wellbeings

Sustainable service delivery considers the manner in which services are delivered and their impact on the four wellbeings.

The Local Government (Community Well-being) Act moved away from the previous efficient, effective and appropriate service delivery focus by restoring the four community well-beings of:

- Cultural
- Economic
- Environmental
- Social

The wellbeings are considered in all decision making by Council with an assessment in each Council Report.

7.3.2 Cost Effective Delivery of Services

In terms of section 10 (Purpose of local government) there is a clear requirement to meet the current and future needs of communities for good-quality local infrastructure, local public services,… in a way that is most cost-effective for households and businesses.

(2) In this Act, good-quality, in relation to local infrastructure, local public services, and performance of regulatory functions, means infrastructure, services, and performance that are— (a) efficient; and

(b) effective; and

(c) appropriate to present and anticipated future circumstances

In order to demonstrate that the delivery of services are efficient, effective and appropriate; Selwyn District Council has developed and implemented a procurement strategy across the delivery of infrastructure-based services. Value for money is a key objective of this strategy.

Council has undertaken service delivery review: to examine the efficiency and effectiveness of service delivery. In summary the findings were supportive of the current models.

It is noted that transport services are delivered at a cost per km rate among the lowest in New Zealand, while outcome results are some of the best.

Council has an endorsed procurement strategy to ensure that procurement for subsidised roading works is in line with the expectations set out by Waka Kotahi NZTA to achieve the best value for money from investment. The endorsed procurement strategy ensures competitive and efficient markets are maintained through encouraging competition among suppliers, and expects transparency, accountability, and fairness in assessing procurement options.

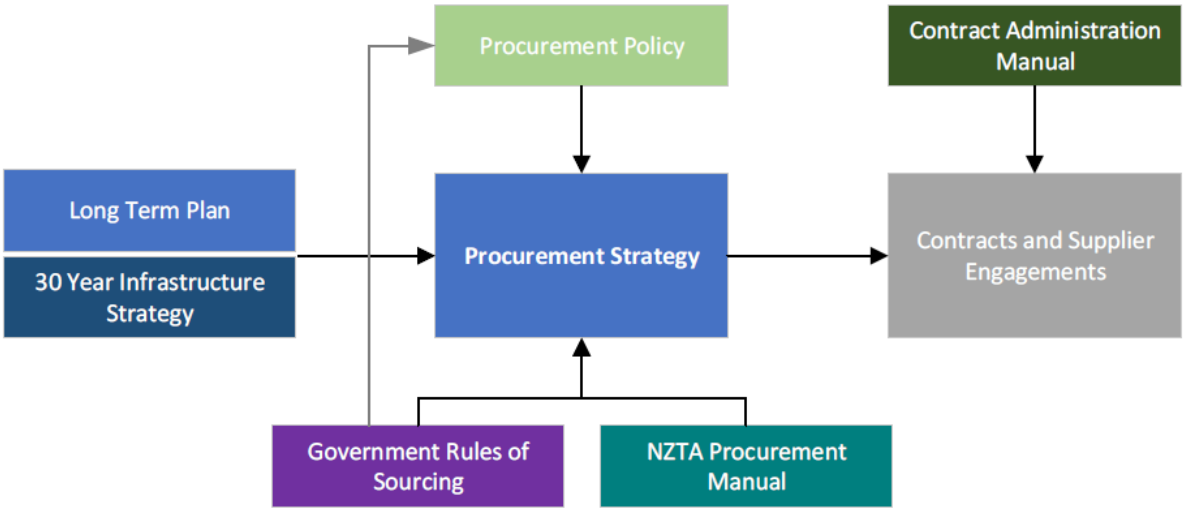


***Figure 6*: Procurement strategy in the wider planning framework (Selwyn Procurement Strategy)**

7.3.3 Response to Affordability

Affordability is a key issue discussed in the Financial Strategy.

7.3.4 Response to Environmental wellbeing

Each of the activities is undertaken in line with the outcomes the community expect. Some portions of activities are subject to resource consents, and council is committed to a high level of performance in this area.

Looking forward sustainability and climate change response are priorities. Sustainability includes a broader view of growth that doesn't not have a negative impact on the environment, while limiting the effects of existing activities. Examples include transitioning to stormwater treatment systems that replicate natural processes. Climate change mitigation involves Council will establishing a benchmark of emissions and progress an action plan to reduce these. Climate change adaptation will ensure a greater degree of resilience to the effects of climate change, both in the short and long term.

7.3.5 Response to the Cultural wellbeing

Legislative changes are bring the relationship with Ngā Runaga into greater focus and this provides an opportunity for Council to build on the existing relationships. Acknowledging the history of the district and engaging meaningfully is for of the District's future.

7.3.6 Response to the Social wellbeing

The Selwyn lifestyle continues to attach residents and businesses to the district. This is part of the cultural fabric that needs to be retained and nurtured. Along with appropriate infrastructure provision, Council has number of programmes designed at building community.

7.4 Addressing Resilience

Both physical and system resilience are crucial. This means:

Design and construction standards (where cost effective) that ensure infrastructure is able to withstand natural hazards and long term changes in circumstances such as those resulting from climate change.

Organisations and networks of organisations with the ability to identify hazards must share information, assess vulnerabilities, and plan for and respond to emergencies.

Acknowledging the value of adaptability and redundancy in the network to improve business confidence.

Identifying and managing cross-sectoral dependencies, such as power supply for communications infrastructure. Engineering Lifelines groups have already undertaken work in this area (NIP 2011)

Infrastructure resilience is discussed in section 6.5. It is also important to consider community resilience. This is the ability of the community to adapt and progress through challenging times. The rapid growth and the Canterbury earthquakes have placed Council and the Selwyn community under stress and the result has been rapid recovery and a desire to make Selwyn a better place to live.

Council has acknowledged that events may occur at any time, and that Council's planning will focus on operational resilience and Emergency Management. Operational resilience will include 'building in' capacity in systems where this is achieved at a marginal cost and considering sustainability outcomes in the decision-making process.

These actions include:

- Actively participate in CDEM planning and activities, at both regional and local levels
- Investigate options for alternative service provision and system redundancy
- Identify critical assets and ensure mitigation methods are developed
- Obtain insurance where this is deemed to be the most cost effective approach

Allowance for these items has been included in LTP budgets. Council has acknowledged that regular allocations to an emergency reserve fund would be desirable, but this is not a priority for the next ten years when compared with growth response.

7.5 Evidence Base

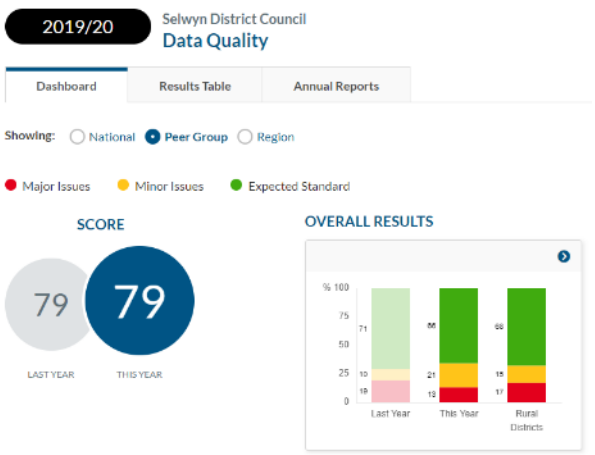
Council acknowledges there are limitations with its data that affect decision-making. A commitment to improving data collection and analysis is indicated below.

A considerable portion of the infrastructure portfolio is relatively new, so good data is available. Council has had data collection and management programmes in place for many years and so data reliability is moderately high. Road and footpath data is comprehensive and the culmination of over fifteen years of through data collection and management programme. 5Waters data is also extensive with well-established practices. Demand management would be better understood with universal metering in place. Community facilities information is less robust but mostly fit for purpose, improvements are proposed to support decision making.

Transportation - Data Confidence

Selwyn placed a strong focus on quality data collection and management early, and have been rewarded with excellent data quality reviews from the outset. These high standards are delivered effectively through the Professional Services for Transportation Asset Information Services contract. The contract is currently held by Beca, and they have held this contract for many years. Beca have consistently delivered exemplary work over their tenure as professional services consultant. One of the main contract deliverables is the collection of High-Speed Data, which gives a more comprehensive representation of the condition of the network. Another contract deliverable is the annual table reviews to ensure that the data captured and stored in RAMM is accurate and realistic. Through these main deliverables along with a number of other contract outputs, have ensured that the collection and management of asset data for the Selwyn road network has been remarkable for a number of years and continues to improve.

ONRC Data Quality Assessments



The performance measures reporting tool also assesses the quality of data supplied, and tracks the changes to quality over time. The quality is assessed overall and assessments are further broken down into individual categories and dimensions. These individual assessments help direct efforts to improve areas where data quality is lower, ensuring that the system remains reliable and robust. Selwyn has had consistently strong data quality results since the scores were initially released in FY 2016/17

Figure 7: PMRT Provisional 2019/20 Data Quality Assessment (ONRC Performance Measures Reporting Tool)

5Waters – Data Confidence

The 2019 Infrastructure valuation provides a commentary on data quality.

Asset Group	Asset Sub-Group	Quantity	Attributes	Unit Costs	ORC	Rem Life	ODRC
Land Drainage	Linear	A	B	B	B	A	B
	Plant and Equipment	A	C	B	B	B	B
	Consents	A	A	B	B	A	B
Sewer	Linear	A	A	B	B	A	B
	Plant and Equipment	A	B	B	B	B	B
	Consents	A	A	B	B	A	B
Stormwater	Linear	A	B	B	B	B	B
	Plant and Equipment	A	B	B	B	B	B
	Consents	A	A	B	B	A	B
Water Races	Linear	A	B	B	B	A	B
	Plant and Equipment	A	C	B	B	B	B
	Consents	A	A	B	B	A	B
Water	Linear	A	A	B	B	A	B
	Plant and Equipment	A	B	B	B	B	B
	Consents	A	A	B	B	A	B

Based on the quality of the information provided, we have assessed the valuation to have an overall confidence rating of B (i.e. ±10% - 15%) for the 2019 values.

The critical assets section of the AMP notes that improving data quality is aligned with asset criticality.

Community Facilities – Data Confidence

An assessment of the data used to underpin this AM Plan has been undertaken. Accuracy grades suggested in the International Infrastructure Management Manual (IIMM) have been used for this process and are defined in the table below.

Grade	Description	Accuracy
1	Accurate	± 2%
2	Minor inaccuracies	± 10%
3	50% estimated	± 20%
4	Significant data estimated	± 30%
5	All data estimated	± 40%

Table 7-5: Data Accuracy Grades

The Data Accuracy Assessment **Error! Reference source not found.**is summarised below, here the grading is less than '2', the implications for Asset Management and Planning are discussed in the AMP.

Data Set	Accuracy Grade
Asset Inventory	2/3
Spatial	2/3
Condition Information	2/3
Performance Information	2/3
Population Projections	2
Demand: Capacity, Utilisation, Growth	2/3
Asset Age	3/4
Maintenance history	3
Valuation	1/2/4

Solid Waste Management

There is no significant assets requiring data quality processes.

Information Gaps

The some extent there will always be some gaps in the information available. The Council-level assumptions and uncertainties report address the information gaps and risks at the high level, in this section the discussion focuses on information gaps at a finer granularity.

A full risk register is included in the IIMM-style Activity Management Plan document, discussing all knowledge gaps and planning and operation risks at length. The critical information gaps to be mindful of when assessing the evidence for investment include:

- The unknown difference in the modelled and actual traffic volumes, and how this impacts the growth models,
- How changes to amounts of traffic demand will change the nature of demand,
- How changes in government will affect the legislative and policy frameworks that decisions are made under, and what the implications of these changes will be on decisions made under previous frameworks,
- How the performance indicators correspond to customer experience and whether the level of service goals and actual performance still adequately correlate,
- How future technology will change and what the implications of these changes will be on user behaviour, planning, and funding environments.

These information gaps have the potential to change the outcomes of proposals, but assessments of the risks have been made and mitigations have been proposed to minimise the impact of the knowledge gaps. The residual risks of the unknowns has been deemed negligible, as more information will become available closer to the time that the impact of the risks may be felt.

A commitment to improving data collection and analysis is indicated below.

Table 7.1: Data Improvements

Activity	Data to be collected	Data to be analysed	Value this data provides
Water Supply	Zone and universal metering	Water demands	Universal metering provides a comprehensive data set that helps understand peak demands
Transportation	Asset condition	Deterioration modes and rates	Modelling for renewal planning in line with changes in demand patterns
Community Facilities	More detailed capital planning	Population and demographics Expectations	With rapid growth the communities' expectations can change quickly, provision of fit for purpose facilities should be continually assessed

The approach to data collection and management will be discussed in the respective asset management plans and budgets included where appropriate.

7.6 Significant Decisions Required

Key Decisions for Council

The real value of the infrastructure strategy is raising issues and discussing community focussed solutions. Many of the issues will not be translated into immediate action, but are identified for a point in the future. These either required further information, or will be driven by changes and demands over time. Some changes (such as the management of water supplies) will be due to the legislative/regulatory environment and could be unexpected; while others will become more urgent over time.

The key decisions identified for discussion or noting in the 2021-2051 Infrastructure Strategy include:

i. Wastewater Centralisation

Would it be best to combine wastewater treatment in one location, when environmental and cost factors are considered?

Is treatment to a higher level to allow for reuse (e.g. parks irrigation) viable?

ii. Stormwater and drainage impact on water quality
What level of treatment is desirable/will be required?

iii. Water quality and safety

What level is treatment is required, or palatable by the community; will we have the choice?

iv. Water races

What is their future – social and environment benefit?

Perhaps as a biodiversity corridor?

If there is a shift from benefiting consumers, is users pays appropriate?

v. Road Maintenance

What level of service is required, and affordable?

How should funding be allocated across the network?

vi. Passenger transport

As part of the Greater Christchurch partnership, what services are appropriate and when?

vii. Community facilities

What community facilities will serve the population best – centralised and specialised, or distributed

New newer events centres suit the market better than old community halls?

How many do we need, and where should they be?

viii. Future renewals
Selwyn is fortunate that much of its infrastructure is new.
But in thirty years' time we will be facing a future renewals bow wave. When do we need to plan for this in earnest?

Core Activity Decisions Sought from Council over the next thirty years

Water Supply

- Continual implementation of best practice water management and to seek ratepayers willingness for future rate increases to avoid chlorination should this become an option.
- The proposal to lift the volumetric water charge at a greater rate than the annual charge to promote sustainable water use
- Support the clearing of reserve accounts for water and wastewater

Wastewater

- The proposal to connect the Ellesmere wastewater system to the Pines WWTP
- Connection of the Upper Selwyn Huts to the above pipeline
- Progress with Pines 120k and the final stages of Pines 60k to ensure Council meets the opportunity of future growth demand
- Construction of a wastewater pipeline between Darfield & Kirwee and Pines WWTP

Land Drainage

- Consult on the proposed District Wide Rating Structure for Land Drainage including the public good rate
- Consult on the proposal to transition to a new Management and Governance structure
- Amend the Land Drainage areas in Lincoln and Leeston
- Name change from ‘Land Drainage’ to ‘Drainage and Waterways Management’

Water Races

- The proposal to increase the Water Race public good rate to $45 to ensure key strategic water races remain open for biodiversity and amenity.

Stormwater

- Continued investment in flood protection works across the district

The following table outlines the decisions in planning blocks.

What decisions will Council face? When should that be?

Activity	Years 1 to 3 (2021/22 – 2023/24)	Years 4 to 10 (2024/25 – 2030/31)	Years 11 to 20 (2031/32 – 2040/41)	Years 21 to 30 (2041/42 – 2050/51)
Transportation	**Road Maintenance** What level of service is required, and affordable? *What options are there for service delivery?* How should funding be allocated across the network? **Passenger transport** As part of the Greater Christchurch partnership, what services are appropriate and when?	*What can be done to encourage 'higher' densities near transport hubs to encourage PT usage and greater range of housing stock?*	*For MRT, what adaption can be made to use what we have, and not be locked into hard infrastructure?*	
Water Supply	**Water quality and safety** What level is treatment is required, or palatable by the community; will we have the choice? *Do we understand the impact of nitrates on source water and the treatment required for human use?*	*What isolated schemes should be combined with others, and how?*		
Wastewater – Collection, treatment and disposal	**Wastewater Centralisation** Would it be best to combine wastewater treatment in one location, when environmental and cost factors are considered? *What is the situation with wastewater for Darfield?* Is treatment to a higher level to allow for reuse (e.g. parks irrigation) viable?	*Centralisation supported by the majority of councillors; what is required to move this along?*		
Stormwater and Land Drainage	**Impact on water quality** What level of treatment is desirable/will be required?	*What is required to support an improvement in biodiversity?* *Are our stormwater and flood control system adequate for long term community resilience?*		

Activity	Years 1 to 3 (2021/22 – 2023/24)	Years 4 to 10 (2024/25 – 2030/31)	Years 11 to 20 (2031/32 – 2040/41)	Years 21 to 30 (2041/42 – 2050/51)
Water Races	**What is their future** – social and environment benefit? *What is the future plan?* Perhaps as a biodiversity corridor? If there is a shift from benefiting consumers, is users pays appropriate?	*What is required to support an improvement in biodiversity?*		
Waste Management	**Kerbside Collection** Contract		Kate Valley **Regional Landfill** consent until 2039.	
Community facilities	**What community facilities will serve the population best**? – centralised and specialised, or distributed New newer events centres suit the market better than old community halls? How many do we need, and where should they be?	- *Implement key planning documents that will help to determine: How many?* - *What kind?* - *Where?* *Including the Community Centres, Halls and Libraries Network Plan, the Selwyn Aquatic Facilities Plan, The Eastern Selwyn Community Spaces Plan and the Open Spaces Strategic Plan*		
Future renewals Selwyn is fortunate that much of its infrastructure is new. But in thirty years' time we will be facing the start of a future renewals bow wave. When do we need to plan for this in earnest?				

8.0 SIGNIFICANT INFRASTRUCTURE ISSUES

The Local Government Act 2002 Section 101B – Infrastructure Strategy states:

(2) The purpose of the infrastructure strategy is to—

"(a) identify significant infrastructure issues for the local authority over the period covered by the strategy; and

"(b) identify the principal options for managing those issues and the implications of those options.

In developing this 30 Year Strategy Council identified the anticipated significant infrastructure issues over the 30 years and considered each significant action and the benefits of the action. The significant infrastructure issues faced by Selwyn District Council - with the assessed benefits and costs - are discussed below. The items listed in the summary tables reflect projects - or combinations of projects - with a level of investment exceeding $1M and are shown in 2021 inflated dollars.

These will be addressed in the Long Term Plan for the next 10 years – and many are directly addressed within this consultation document - and all will continue to be addressed over the coming 30 years.

8.1 Water

Goal

Council's goal for the water activity is:

'To provide water services that meet all relevant standards with a level of service the public can afford and have confidence in, both now and moving forward into the future'.

Council contribution to community outcomes

Five waters activities contribute to the following community outcomes:

- *A clean environment;*
- *A district with a rural identity;*
- *A healthy community;*
- *A safe place to in to which live, work and play;*
- *An educated community;*
- *A prosperous community;*
- *An accessible district; and*
- *A community which values its culture and heritage.*

In developing this infrastructure strategy the following specific issues have been identified:

Water quality and safety	What level is treatment is required, or palatable by the community; will we have the choice?
	Should Council advance any Chlorination projects?
Water rates	Do we shift to a volumetric charging structure?
	(20% increase 2022 & 2023)

Infrastructure Sustainability

The 5 Waters activities are mutually inter-dependent, and the Council will provide the extent and quality of service demanded by the community and legislation. This involves prudently managing the acquisition, maintenance, operation, renewal and disposal of water assets in ways that optimise the value of services delivered to the community.

Infrastructure sustainability is a core part of the Council's vision for successful asset management. This will be achieved through ensuring that:

- Growth and demand is monitored to ensure a timely provision of infrastructure;
- Vested assets are fit for immediate and long term community needs;
- Assets are maintained and renewed to meet the needs of current and future generations;
- Natural resources are managed responsibly and sustainably

Resource Consents

Council holds a significant number of resource consents for water supply. Renewal of this is an ongoing process, coordinating demand and utilisation requirements with consent expiry.

Work programmes and forecasts include renewal processes and expected actions.

Service Delivery

Services are delivered through a negotiated contract with SICON Ltd. This may change as part of the Water Reforms, but this is unclear at this stage.

From 2021 the service delivery contract reflects the latest Water Safety Plans.

Demand and Asset Management

Based on current community growth trends, demand for potable water supply services have the potential to exceed consented allowances in some schemes in the future. This analysis is based on the Council's population information, a detailed review of historical records and forward predictions of use, after factoring in potential climate changes as well as engineering staff / contractor knowledge.

Achieving reasonable usage, particularly in the areas of potable water and stock water supply, is a key factor in this Long Term Plan. In particular, the need to ensure that water is used wisely, sits above all other issues in the operations and maintenance sphere. The strong relationships between water use and wastewater disposal, stormwater, water race and land drainage systems have been provided for through integrated project planning.

Projects which assist in passive (e.g. education), and active demand management are identified. The outcome sought is to meet environmentally-driven consent constraints while providing an appropriate service.

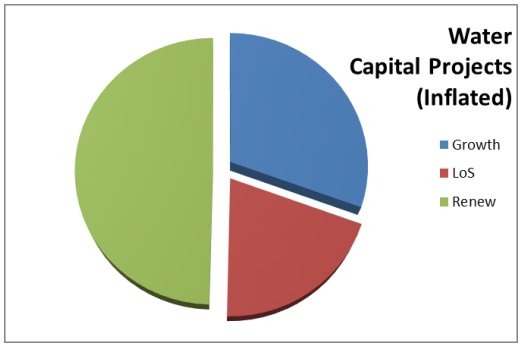
Operations Expenditure

Expenditure for water services constantly trend in line with growth, with additional spending to meet increasing water quality/security requirements, over the next ten years.

Projects

The exemption criteria for chlorination is yet to be confirmed by the new regulator. Costs to comply are expected to be in the order of $30 million. This would translate into a $100 rise in individual annual rates.

There are 60 major projects (>$100k) for water in the LTP budget. Many of the projects have been triggered by the need to update and seek CDHB approval for Water Safety Plans. A graph showing the budget for all water supply projects is provided in Figure 3.6. 'Projects' are typically desktop in nature and 'Capital projects' are physical construction.



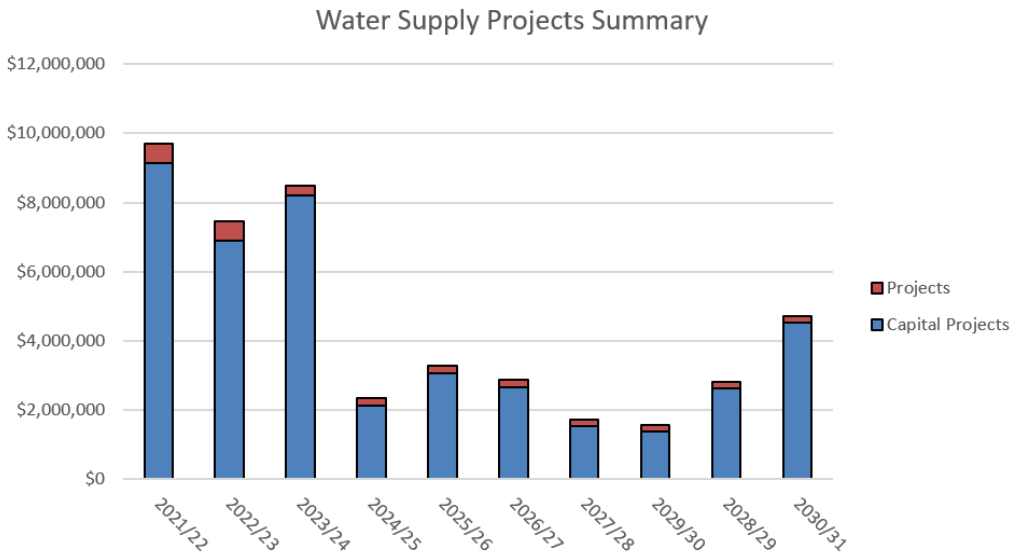


Figure 3.6 Water Projects 2021-2031

Renewals

The renewal profile has been taken from the 2019 5 Waters Valuation with minor smoothing and optimisation of expenditure.

Council previously calculated the annual funding of the renewal reserve based on the 30 year average of the inflated costs. This Long Term Plan proposes a similar process but without the costs being inflated.

Council's current approach is to fund through the targeted rate the annual average cost of the renewals required in the next 30 years. This infrastructure strategy means large renewal projects are funded over a longer period.

8.2 Sewerage

Goal

Council's goal for the sewerage activity is:

'To provide water services that meet all relevant standards with a level of service the public can afford and have confidence in, both now and moving forward into the future'.

Council contribution to community outcomes

Five waters activities contribute to the following community outcomes:

- *A clean environment;*
- *A district with a rural identity;*
- *A healthy community;*
- *A safe place to in to which live, work and play;*
- *An educated community;*
- *A prosperous community;*
- *An accessible district; and*
- *A community which values its culture and heritage.*

In developing this infrastructure strategy the following specific issues have been identified:

Wastewater provision	Would it be best to combine wastewater treatment in one location, when environmental and cost factors are considered? How can service coverage be expanded? Should we connect Darfield, Ellesmere and Upper Selwyn Huts wastewater to Pines WWTP?

Infrastructure Sustainability

The 5 Waters activities are mutually inter-dependent, and the Council will provide the extent and quality of service demanded by the community and legislation. This involves prudently managing the acquisition, maintenance, operation, renewal and disposal of water assets in ways that optimise the value of services delivered to the community.

Infrastructure sustainability is a core part of the Councils vision for successful asset management. This will be achieved through ensuring that:

- Growth and demand is monitored to ensure a timely provision of infrastructure;
- Vested assets are fit for immediate and long term community needs;
- Assets are maintained and renewed to meet the needs of current and future generations;
- Natural resources are managed responsibly and sustainably

Resource Consents

Council holds a significant number of resource consents for water supply. Renewal of this is an ongoing issue, coordinating demand and utilisation requirements with consent expiry. The number of comments involved is illustrated below.

In terms of the largest schemes; resource consents for ESSS (Pines) are due to expire in 2038 and 2045. Consent for Ellesmere WWTP are due to expire in 2029, discussion on options associated with this plant follow. Options for Upper Selwyn Huts are also discussed.

Work programmes and forecasts include renewal processes and expected actions.

Service Delivery

Services are delivered through a negotiated contract with SICON Ltd. This may change as part of the Water Reforms, but this is unclear at this stage.

Demand and Asset Management

Based on current community growth trends, demand for wastewater services have the potential to exceed consented allowances in some schemes in the future. This analysis is based on the Council's population information, a detailed review of historical records and forward predictions of use, after factoring in potential climate changes as well as engineering staff / contractor knowledge.

Achieving reasonable usage, particularly in providing the expected service levels for wastewater treatment and disposal, is a key factor in this Long Term Plan. In particular, the need to ensure that water is used wisely and is disposed of appropriately sits above all other issues in the operations and maintenance sphere. The strong relationships between water use and wastewater disposal, stormwater, water race and land drainage systems have been provided for in integrated projects.

Projects which assist in passive (e.g. education), and active demand management are identified. The outcome sought is to meet environmentally-driven consent constraints while providing an appropriate service.

Issue – Eastern Selwyn Sewerage Scheme Treatment Capacity

The ESSS is a modular system, designed to be extended in line with the growth of demand.

Two options were considered for "Pines 120" (i.e. upgrading Pines WWTP to serve 120,000 PE), as summarised in Table 4.1.

- Option 1 Fully aerobic system (similar to current plant)
- Option 2 Primary treatment + anaerobic digestion

Table 4.1 Options considered for the future of Pines WWTP (Pines 120)

Parameter	Fully Aerobic System	Primary Treatment + Anaerobic Digestion
Capital Cost	$38.3M	$33.4M
Operations	Higher operational cost. More aeration (blowers, diffusers) required. Ongoing MBR replacement costs. Ongoing MBR power requirements.	Lower operational cost. Opportunities for income from resource recovery. Anaerobic digestion produces methane and power / heat for reuse within the WWTP. Improved sludge digestion and removal. Reduced exposure to fluctuations in the cost of power.
Sludge	Sludge quantities increasing proportionally to existing status quo (ignores improvements through proposed new thickener).	Anaerobic digestion reduces the amount of sludge generated and requiring disposal.
Effluent quality	Lower solids in treated wastewater due to membrane separation.	Solids quality meets existing treatment requirements.

Aerobic (option 1) has less up-front cost (up to 80,000 PE), but is more expensive in the long run. Council staff recommend proceeding with Option 2 (anaerobic), as this is less costly in the long term and creates a number of opportunities for resource recovery.

Financial modelling is underway by PricewaterhouseCoopers to confirm the overall scheme cost to existing ratepayers and developers, for each of these options.

Timing of upgrades to Pines WWTP

Master planning has forecasted when upgrades would be required to the Pines WWTP, based on the population growth predicted by SDC.

Table 4.2 Upgrades required to Pines WWTP based on connected population

Population milestone (population equivalents)	35,000	40,000	45,000	52,000	60,000	80,000	100,000 – 120,000
Pines WWTP upgrade cost	$6.70M	$5.37M	$5.15M	$14.43M	$8.26M	$28.46M	$15.65M

(preliminary figures subject to change)

Disposal to land at Pines WWTP

- Council currently has 485 ha of land for wastewater treatment and disposal.

ESSS Resilience assessment

In 2019, Selwyn District Council engaged two consultants (WSP & Stantec) to do a resilience assessment for the Eastern Selwyn Sewerage Scheme. The consultants and Council staff identified the critical assets within the scheme, including pipelines, pumps and the Pines WWTP

The model shows that the ESSS would perform well under most of the scenarios. There is significant storage built into the network, which prevents overflows in most cases. The consultants recommended a number of actions to improve the resilience of the scheme. These action items have been budgeted for, with a total cost of less than $150,000 in addition to staff time.

Ellesmere WWTP

The Ellesmere WWTP serves the communities of Leeston, Southbridge and Doyleston. These communities are forecast to experience moderate growth, with an additional 516 people expected in the catchment by 2031 (total population of 4,401 people in 2031).

Wastewater treatment plant constraints

The Ellesmere WWTP is affected by four significant constraints:

1. Beca recently found that the treatment process is operating beyond its intended design capacity (Beca, September 2020). Upgrades are required to meet consent conditions now and in future, including catering for future growth. Treatment improvements are required to reduce nitrogen in the treated effluent.
2. Lowe Environmental Impact found that nitrogen loss for the scheme is dominated by winter drainage, and that the irrigation fields sometime struggle to cope with the hydraulic loading of wastewater being applied. Thus hydraulic loading is often more of a constraint than nitrogen loading.
3. The site is also subject to periodic flooding (Figures 4.4 & 4.5), disrupting the ability to discharge wastewater to land.

4. Aqualinc ("*Impact of Climate Cycles and Trends on Selwyn District Water Assets: 2020 Update*") found that Ellesmere WWTP would be expected to not be able to discharge to land because of high groundwater, roughly every year, usually for 4 – 5 days at a time but up to 12 days/year at times. This reinforces the need for extended storage at Ellesmere WWTP.

Detail of preferred option: pipe wastewater to Pines WWTP
Partially treated wastewater would be pumped from the Ellesmere WWTP to the Pines WWTP. The preferred pipeline route is 21km long and crosses the Selwyn River at the bridge on Leeston Road The pipe route follows the existing roadway and does not cross privately owned land.

The catchment area proposed for the pipeline includes the current Ellesmere WWTP catchment and three other areas: Selwyn Huts and the campground at Chamberlains Ford and Coes Ford

The consultants considered the options of conveying raw wastewater or treated effluent. The problems presented by conveying treated wastewater to Pines WWTP would have less negative effect compared to raw wastewater, as well as a lower capital cost. For this reason it is assumed treated effluent is pumped to the Pines WWTP. 'Treatment' is simply through the existing waste stabilisation ponds.

Staff recommend pumping wastewater to Pines WWTP, as upgrading the Ellesmere WWTP has a high capital cost and is considered to be higher risk. Funding between the existing community and growth was completed by PricewaterhouseCoopers.

Upper Selwyn Huts

The community's wastewater is collected and treated in an oxidation pond, then spread on land near the lake. The resource consent was given in 2000, and expires in June 2020. The population served is around 100 residents.

Key issues/constraints for wastewater

- The existing border dyke disposal system (and nitrogen loading rate) has a significant potential environmental effect given the shallow depth to groundwater and the sensitivity of the surrounding environment.
- There is high inflow/infiltration into the wastewater system, from high groundwater levels and including illegal stormwater cross-connections (though this latter issue has been greatly reduced through proactive action by Council)
- A higher lake level in Te Waihora would result in more times when border dyke irrigation of Upper Selwyn Huts is not possible
- Some historic flooding has also been observed
- The existing wastewater consent for the Selwyn Huts expired in 2020. In order for the consent to be renewed by Environment Canterbury, significant enhancements will need to be undertaken.
- Due to the age & condition of the sewer and issues with high infiltration, the reticulation needs to be replaced
- There is a drinking water protection zone located within the southern part of the settlement, which constrains the area available for wastewater disposal to land.
- A new on-site system (if chosen) would be located in the recreation reserve to the east of the huts. This would exclude the use of parts of the reserve for recreation purposes.

Option 1 (preferred): connect Upper Selwyn Huts to the Ellesmere/Pines pipeline

If a pipeline is installed from Ellesmere WWTP to Pines WWTP, this presents an opportunity to connect Upper Selwyn Huts to the scheme. The two pipe routes are estimated to have similar costs ($1.4m for the route to Chamberlains Ford in red; $1.5m for the direct route along Selwyn Lake Road). These costs include an intermediate pump station at Coes Ford, allowing connection of the camping ground at this location and maintaining flushing velocities in the rising main.

Darfield & Kirwee

The town of Darfield is one of the largest un-sewered communities in New Zealand. Although there is minimal environmental or public health impact from the existing septic tanks, the community has shown interest in a reticulated wastewater system. Kirwee will also be included into any wastewater scheme for Darfield.

Options considered

Council have engaged consultants to prepare concept designs and cost estimates for a reticulated wastewater system for Darfield and Kirwee. Two alternatives have been considered:

- Conveyance of raw wastewater to Pines WWTP (26km pipeline); or
- Treatment by biological trickling filter and disposal at Darfield via irrigation

Financial modelling was completed by PricewaterhouseCoopers.

Recommended option: pipe to Pines WWTP

Council have decided to pursue the option of conveyance of wastewater to Pines WWTP, and have sought $10.66 million of stimulus funding from the central government to subsidise this scheme. The decision of whether to proceed with the scheme will be subject to LTP consultation.

Reticulation for Darfield & Kirwee

Reticulation options have been developed for both Darfield and Kirwee. Both Darfield and Kirwee would be served primarily by gravity sewers, with low-pressure sewer catchments used where required.

In the budget, we have allowed to build Darfield & Kirwee reticulation in stages. Stage 1 will focus on new development areas. Stage 2 and 3 will extend reticulation to existing properties

Industry Benchmarking

Council participates in the Water New Zealand National Performance Review.

Selwyn District Council's average annual residential wastewater charge is $542. This is higher than our neighbouring districts and the national average, as follows:

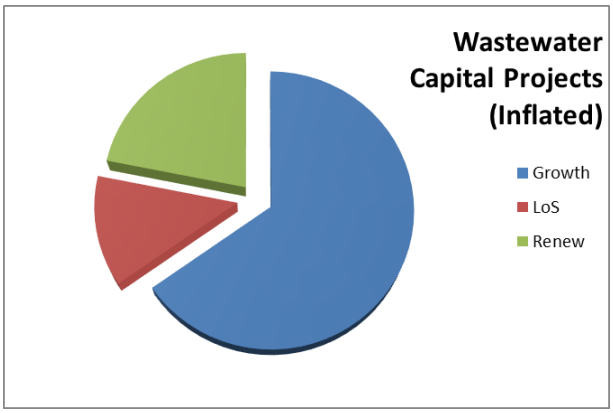
- Christchurch City Council $391
- Waimakariri District Council $488
- Ashburton District Council $433
- NZ national average $509

Operations Expenditure

Expenditure for wastewater services constantly trend in line with growth over the next ten years

Projects

There are 36 major projects (>$100k) for wastewater in the LTP budget. Most of the projects are required to meet growth demands and environmental outcomes. A graph showing the budget for wastewater is provided in Figure 4.17 below. 'Projects' are typically desktop in nature and 'Capital projects' are physical construction.



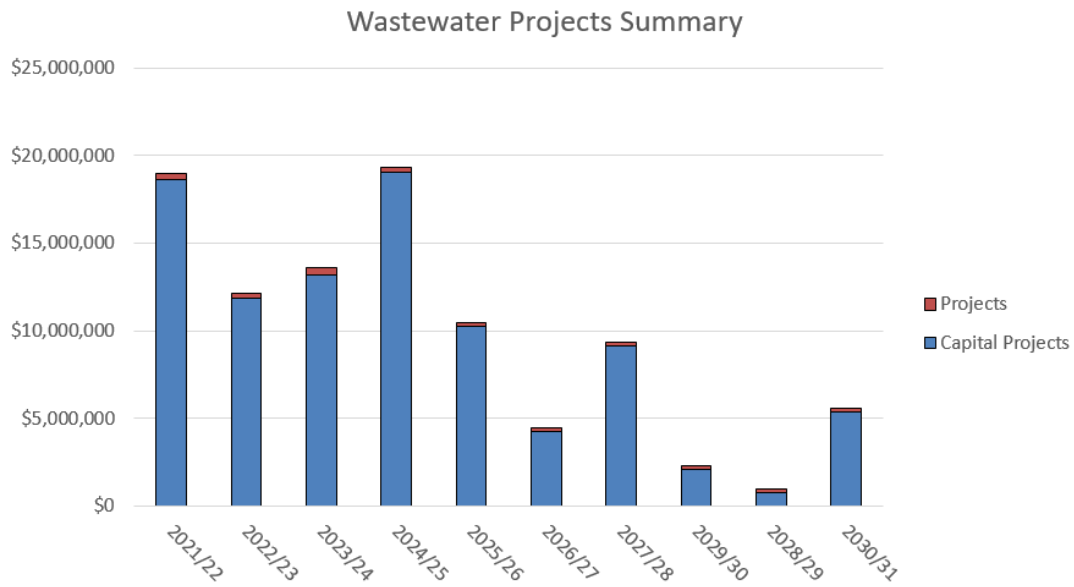


Figure 4.17 Wastewater Projects 2021-2031

Renewals

The renewal profile has been taken from the 2019 5 Waters Valuation with minor smoothing and optimisation of expenditure.

Council previously calculated the annual funding of the renewal reserve based on the 30 year average of the inflated costs. This Long Term Plan proposes a similar process but without the costs being inflated.

Council's current approach is to fund through the targeted rate the annual average cost of the renewals required in the next 30 years. This infrastructure strategy means large renewal projects are funded over a longer period.

Once the 1 July 2020 valuation is complete the renewal profile in the accounts will be updated. Therefore confirmed wastewater rates will be available early 2021.

8.3 Stormwater

Goal

Council's goal for the stormwater activity is:

'To provide water services that meet all relevant standards with a level of service the public can afford and have confidence in, both now and moving forward into the future'.

Council contribution to community outcomes

Five waters activities contribute to the following community outcomes:

- *A clean environment;*
- *A district with a rural identity;*
- *A healthy community;*
- *A safe place to in to which live, work and play;*
- *An educated community;*
- *A prosperous community;*
- *An accessible district; and*
- *A community which values its culture and heritage.*

In developing this infrastructure strategy the following specific issues have been identified:

Stormwater and land drainage What level of treatment is desirable/will be required?

Infrastructure Sustainability

The 5 Waters activities are mutually inter-dependent and the Council will provide the extent and quality of service demanded by the community and legislation. This involves prudently managing the acquisition, maintenance, operation, renewal and disposal of water assets in ways that optimise the value of services delivered to the community.

Infrastructure sustainability is a core part of the Councils vision for successful asset management. This will be achieved through ensuring that:

- Growth and demand is monitored to ensure a timely provision of infrastructure;
- Vested assets are fit for immediate and long term community needs;
- Assets are maintained and renewed to meet the needs of current and future generations; and
- Natural resources are managed responsibly and sustainably

Resource Consents

Integrated catchment management plans are in place for all major townships, this is part of the discharge consent process.

Service Delivery

Services are delivered through a negotiated contract with SICON Ltd. This may change as part of the Water Reforms, but this is unclear at this stage.

Demand and Asset Management

Based on current community growth trends, demand for stormwater services have the potential to exceed consented allowances in some schemes in the future. This analysis is based on the Council's population information, a detailed review of historical records and

forward predictions of use, after factoring in potential climate changes as well as engineering staff / contractor knowledge.

The strong relationships between water use and wastewater disposal, stormwater, water race and land drainage systems have been provided for in integrated projects.

Projects which assist in passive (e.g. education), and active demand management are identified. The outcome sought is to meet environmentally driven consent constraints while providing an appropriate service.

Environmental Outcomes

Plan Change 4 to the Land and Water Regional Plan, referred to as the "Omnibus" plan change, administered by Environment Canterbury amends the policies and rules relating to the management and operation of stormwater discharges into and from reticulated stormwater systems. It requires operators of these systems to implement methods to manage the quality and quantity of all stormwater entering their system. From 2025, Council will be responsible for all stormwater discharges from its network.

The changes in the Land and Water Regional Plan rules mean that Council was required to lodge all stormwater network consent applications by 30 June 2021 and from 2025

Council is required to account for and are responsible for the quality and quantity of stormwater discharges from their network. Currently 'high risk' sites like petrol stations are excluded from Council's consents. These changes along with the National Policy Statement for Fresh Water will drive an increased focus on stormwater management through the next 10 years, and incur increased operational costs.

Stormwater Catchment management plans have been developed for some population centres but not all. These will be required as part of the process of obtaining a global stormwater consent.

Industry Benchmarking

Council participates in the Water New Zealand National Performance Review.

Selwyn District Council's average annual residential stormwater charge is $94. This is significantly lower than our neighbouring districts and the national average, as follows (note Ashburton District's stormwater charge was not able to be compared on this basis):

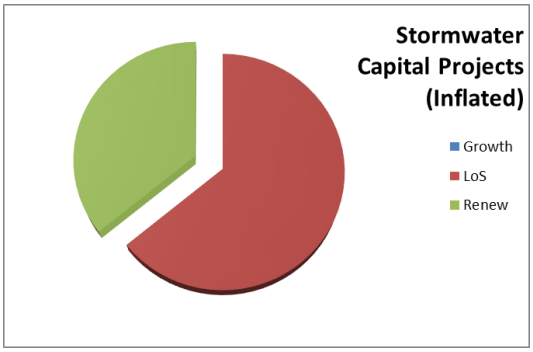
- Christchurch City Council $218
- Waimakariri District Council $238
- NZ national average $169

Operational Expenditure

Expenditure for stormwater services are relatively constant with a slight upward trend in line with growth over the next ten years

Projects

There are 15 major projects (>$100k) for stormwater in the LTP budget. Many of the projects have been triggered by the need to improve the level of service and/or environmental performance of stormwater systems prior to 2025/26. Figure 5.2 shows the budget for all stormwater projects. Projects' are typically desktop in nature and 'Capital projects' are physical construction.



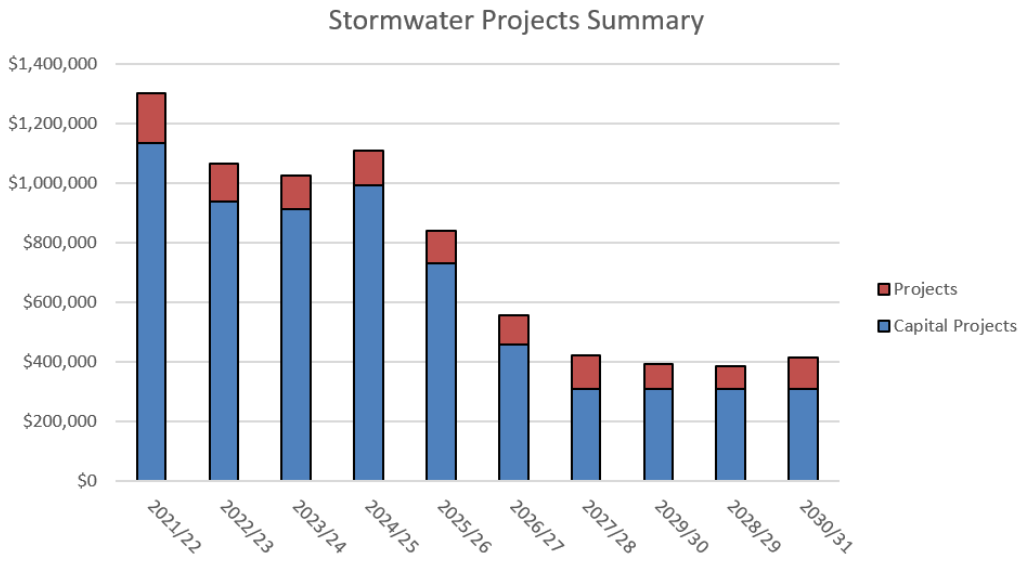


Figure 5.2 Stormwater Projects 2021-2031

Renewals

The renewal profile has been taken from the 2019 5 Waters Valuation with minor smoothing and optimisation of expenditure.

Council previously calculated the annual funding of the renewal reserve based on the 30 year average of the inflated costs. This Long Term Plan proposes a similar process but without the costs being inflated.

Council's current approach is to fund through the targeted rate the annual average cost of the renewals required in the next 30 years. This infrastructure strategy means large renewal projects are funded over a longer period.

Once the 1 July 2020 valuation is complete the renewal profile in the accounts will be updated. Therefore confirmed stormwater rates will be available early 2021.

8.4 Land Drainage

Council's goal for the land drainage activity is:

To provide water services that meet all relevant standards and are at a service level the public can afford and have confidence in, now and forward into the future.

The land drainage schemes are party of the area's ecosystems and are important from ecological and freshwater management perspective. Accordingly management in future will be more cognisant of wider environmental issues.

Key issues and constraints

There are a number of emerging issues for Land drainage schemes. These are:

- Increased resource consent complexity;
- Increased H&S Requirements;
- Move towards environmental outcome focus;
- Increasing Iwi interest and involvement;
- Increasing LoS expectations; and
- Increased environmental monitoring and reporting.

Governance and rating review

Council held a workshop with the Land Drainage Committee chairs on 5th November 2020, to discuss the future governance, rating structure and management/operation of the land drainage schemes.

The key discussions during the workshop were:

- A new governance structure was proposed
- A new rating structure was proposed (refer below)
- Consideration of a new name: 'Drainage & Waterway Management'
- Amend the Land Drainage rating areas

There was general support/acceptance of the proposals.

Resource consent renewals are part of this ongoing discussion.

Operations Expenditure

Projected expenditure remains steady at around $250,000 per year

Projects

There are no major capital projects proposed for Land Drainage in the LTP budget. Figure 6.4 shows the budget for all land drainage projects. $100,000 of environmental enhancements will be added to annual budgets should the public good rate be improved. Projects' are typically desktop in nature and 'Capital projects' are physical construction.

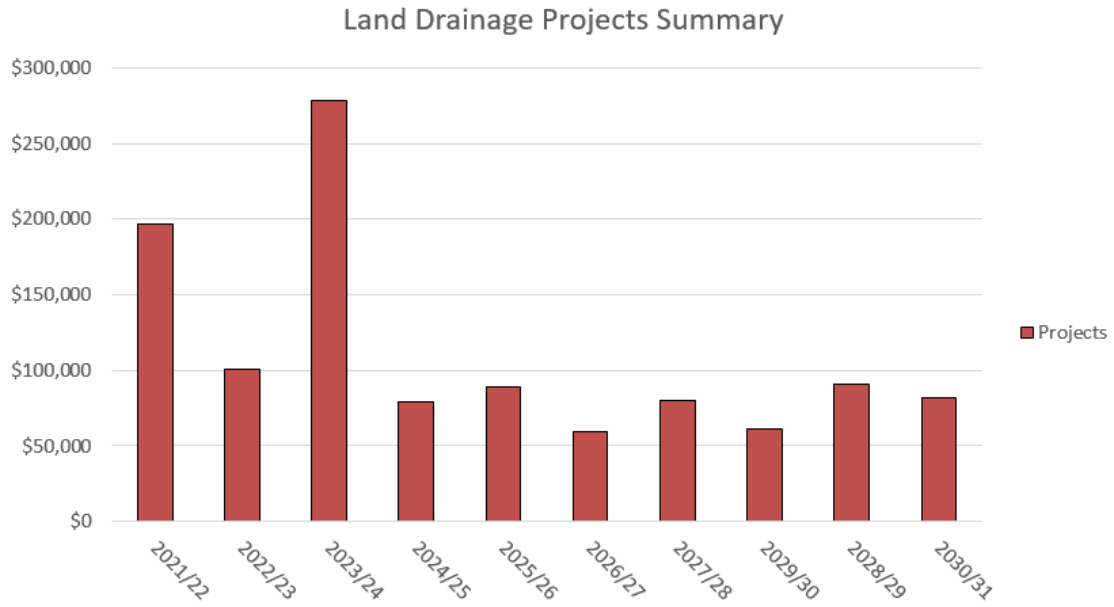


Figure 6.4 Land Drainage Projects 2021-2031

8.5 Water Races

Council's goal for the Water Races activity is:

To provide water services that meet all relevant standards and are at a service level the public can afford and have confidence in, now and forward into the future.

In developing this infrastructure strategy the following specific issues have been identified:

Water Races	What is their future – their social and environmental benefit, and role as biodiversity corridors?

There are presently three water race schemes within the district: Ellesmere, Malvern and Paparoa; these generally service the plains areas of the old County Councils (pre-1989 amalgamation). The Selwyn scheme with its intake on the Selwyn River was closed in 2009.

Following on from the successful completion of Stage 1 of the Central Plains Water Ltd Scheme supplying surface water to 23,000 Ha in the Te Pirata Area; Infrastructure is being constructed to irrigate 20,000 Ha in the Darfield area (Stage 2), and 4,300 Ha in the Sheffield/Springfield area.

Council are considering further water race closures, depending on user feedback. There are no significant projects planned until this is addressed. Figure 7.1 shows the strategic priority of water races.

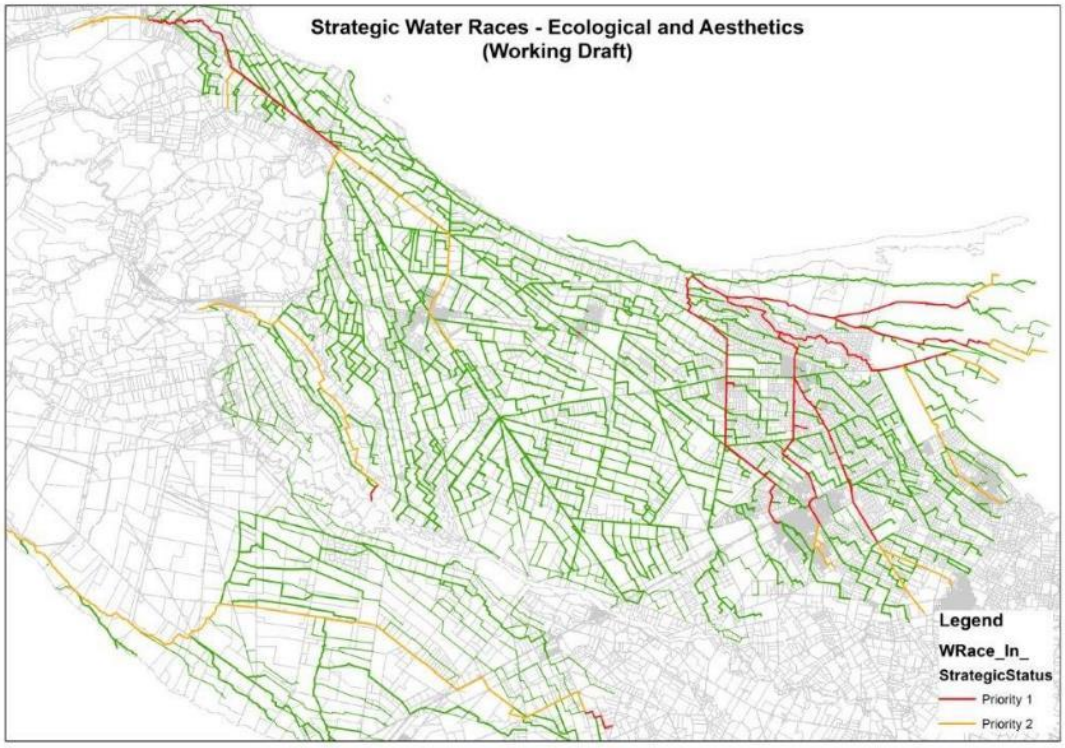


Figure 7.1 Strategic water races in Selwyn District

Red (priority 1) must stay open.
Yellow (priority 2) may be closed if an alternative water source is provided.
Green water races are not strategically essential.

Strategic water races have been identified to remain open for ecological, biodiversity, aesthetics and operations purposes.

Key issues

Over the past 5 years, substantial changes have occurred, which has changed the need for and use of the schemes. These include Central Plains Irrigation scheme and pressure via the Canterbury Water Management Strategy process.

The key operational issues for water races are:

- River intakes: managing floods and river channel changes, to prevent a loss of supply (one of the major operating costs)
- Silt, debris and blockages within the water race network
- Access to water races crossing private property
- Urban areas contributing rubbish to water races
- Unauthorised alterations to water races, or unauthorised taking of water
- Less redundancy now that some water races have been closed
- Reliability of supply to lower ends of the water race network

Water race survey

Council sent a survey to all water race users.

The key findings were:

- Water race users are split almost evenly between those who want the service to continue, and those who do not
- Of those respondents who want the water races to remain open, a wide range of values were recognized (amenity value/aesthetics, biodiversity and irrigation), in addition to the provision of stock water supply
- Many water race users who wanted the service to continue were willing to pay a 5% year on year increase in their rates to ensure the continued operation of the service.
- A large number of users were willing to pay significantly more than this to keep the water races open.

The Ellesmere scheme (upper and lower) has the greatest support for closing the race network. The lower scheme has more properties wanting the race to remain open. The Upper Ellesmere scheme, as previously identified, is the first priority network to be closed.

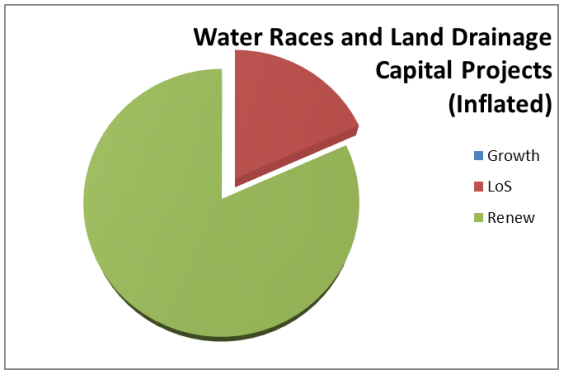
The Malvern and Paparoa networks have a challenging mixture of those that want the races open and those that what them closed. Race closures in these schemes are likely to continue as ratepayer initiated closures, only.

Expenditure

Projected costs are expected to remain steady at around $2.4m per year

Projects

Capital expenditure has been kept to a minimum over the next 10 years as Council works through the rationalisation of the water race network. There are three large capital projects proposed within the budget, relating to health and safety improvements, the automation of the Waimakariri Tunnel intake and upgrade/repair of Bells Divide. ‘Projects’ are typically desktop in nature and ‘Capital projects’ are physical construction.



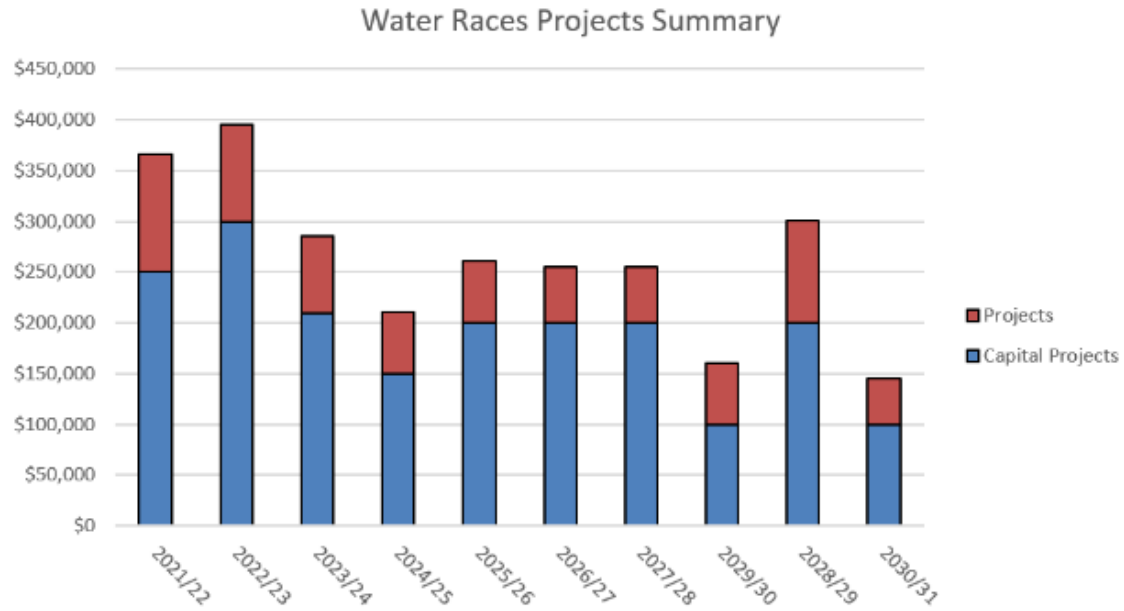


Figure 7.4 Water Race Projects 2021-2031

8.6 Transportation (Roads and Footpaths)

Council's goal for the roads and footpaths activity is:

To maintain, operate, and if necessary, improve the road network and other transport activities to achieve a range of facilities that provide for the safe and efficient movement of people and goods to a standard that is both acceptable and sustainable.

The greatest challenge facing the Selwyn District is the diversity of settings and network uses that occur across the district. Drivers of growth in urban and rural settings are different and are therefore creating divergent demands between the urban and rural networks. As populations grow and industries strengthen, the diversity within the district continues to widen. Selwyn has seen a huge amount of growth in both population and economic activity in the past decade, which has helped to increase the range of uses and demands placed on the transport network.

Current priorities are:

Road maintenance - What level of service is required, and affordable?

Road safety - How should funding be allocated across the network?

Passenger transport - what services are appropriate and when?

These align with *the national focus on*

- *Safety*
- *Better Travel Options*
- *Improving Freight Connections*
- *Climate Change*

Similarly, Council has identified its Funding Priorities as being

- *Attract and match any NZTA subsidy funding available in developing programmes*
- *Preserve the existing asset – support maintenance and renewals*
- *Road Safety – programmes and projects => Road to Zero national directive*
- *Complete what we have started e.g. Prebbleton Arterial Intersections*
- *Align with joint programmes and business cases e.g. Greater Christchurch Partnership*

Looking ahead, responding to demand and user behaviour is key. Enabling modal shift is integral to long term sustainable solutions.

Challenges for this LTP

- *A reduction in national transport funding revenue from the impact of Covid 19.*
- *An intention to limit rate rises.*
- *Differing views with NZTA on Levels of Service for funding.*
- *Changes in NZTA assessment processes and reporting.*
- *Addition of Greater Christchurch transport initiatives to fund.*
- *Funding and delivery of local road upgrades to align to joint business cases*
- *Roll out of "Road to Zero" NZTA Safe Networks Programme upgrades*
- *Council's high rate of growth and pressures on existing transport infrastructure.*
- *High rate and value of vested transport assets received from development*

Road Maintenance and Renewals

This activity comprises the most important core of Councils transport activity ranging from filling in potholes to reconstructing failed sections of pavement on its sealed and unsealed network. Because of the high rate of growth in parts of the district, there is a corresponding increase in use which accelerates the deterioration of the local roading network. This is

exacerbated with the new urban developments, increases in commuter traffic, new local road connections to the new Southern Motorway, and the development of the Rolleston Industrial Zone and Inland Ports (RIZ).

Annually over 520 million Vehicles Kilometres Travelled (VKT) is on Councils roading network, of which 77% is generated by the rural network. The rate of increase is close to that of Selwyn's annual population growth rate of 5.3% over the last 10 years.

Reviewing the issues on the network it is apparent that:

- *Sealed roads are deteriorating across all classes due to increased use*
- *More pronounced deterioration on Arterials & Collectors*
- *Extensive repairs and pre-reseal work impacts on budgets and KPIs*
- *Investment levels are not keeping pace with demand & deterioration*

To address *these issues in a context of limited funding oppetunities*

- *Preserving the existing asset main focus*
- *Undertyake sound deterioratiuon moidelkIking and test this against site knowledge*
- *Request to NZTA they support maintenance and renewals as the first priority*
- *Additional annual $1 million direct funded by Council if required*

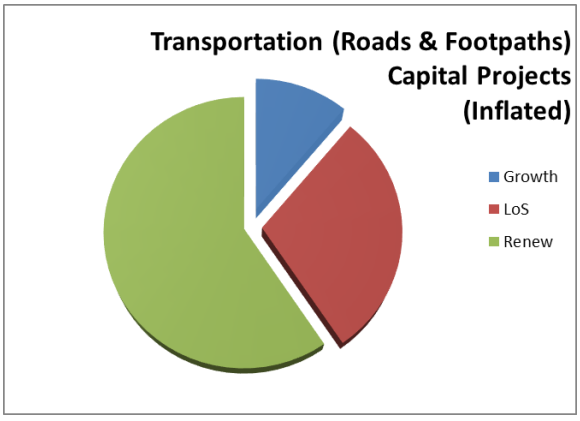
To address these issues in a context of limited funding opportunities

- *Preserving the existing asset main focus*
- Undertake sound deterioration modelling and test this against site knowledge
- *Request to NZTA they support maintenance and renewals as the first priority*
- *Additional annual $1 million direct funded by Council if required*

The focus of an asset preservation strategy is to invest in a sustainable level of pavement renewals to mitigate the manifestation of long term maintenance problems and costs. The primary focus is on the sealed network by keeping up reseals, and where necessary, reconstructing failing pavements to restore levels of service were this is the least cost option compared to continual maintenance.

Projects (CAPEX)

- *Main programme introduced in 2018 LTP - project timing and costs refined further*
- *New projects added to reflect recent local commitments e.g. Rolleston/SH1 access, Greater Christchurch Partnership e.g. Public Transport.*
- *Introduction of Road to Zero – NZTA Safe Network programmes requirements*
- *Continuation of Prebbleton Arterial Intersection Upgrades – high priority in new Regional Transport Programme*
- *Rolleston and Lincoln Town Centre Upgrades have a very large funding and resourcing impact*
- *More projects up to $2 million likely eligible for subsidy funding by the NZTA (we hope)*
- *Timings on projects coordinated to maximize funding by NZTA to achieve "route" upgrades*



Major Project Areas

Major Intersection improvements

- Stage 2 of the Prebbleton Arterial Intersection Programme. Shands/Trents and Shands/Hamptons Road Roundabouts 2022-24.
- Prebbletons first set of traffic signals in 2026/27 at Springs/Tosswill Roads
- Rolleston and Lincoln Town Centre Intersection Upgrades. The upgrade of Rolleston Dr/Tennyson St with signals in 2021-22 due to safety and capacity issues.
- Local Intersection Upgrades from the Rolleston/SH1 Access Business Case with the NZTA
- Upgrades to key Selwyn Rd intersections south of Rolleston to cater for accelerated growth in the area and mounting safety concerns.

New and Upgraded Roads

- Rolleston and Lincoln Town Centre new and upgraded roads
- Extensions of Boardlands Dr and Miejer Dr to complete key links
- Future upgrades to Leeston and Southbridge town centre roads

Walking and Cycling Projects

- Continuation of the $400k annual programme for discretionary footpath extensions until 2029/30.
- Cycleway priority reviewed. Whitecliffs to Glentunnel ranked first due to the work already completed by the Community.
- Cycleways associated with NZTA business cases, and aligned to that possible timing e.g. Rolleston to Burnham Cycleway.

Rolleston/SH1 Access Local Road Upgrades

- The proposed local road and transport projects for delivery by Council related to the Rolleston/SH1 Access Business Case that has been developed by the NZTA and Stakeholders on a “one network” basis. They include road and intersection upgrades, walking and cycling projects and new public transport facilities. This coordinates with the planned state highway upgrades (and rail) through Rolleston - downstream from the end of CSM2 through to Burnham.
- The $10 million contribution by Council to the Rolleston Flyover has been removed from LTP forecasts as the flyover is now fully funded by the government NZUP programme.
- The costs and timing of the overall programme will be refined through further detailed business cases by the NZTA and Council to more accurately inform the 2024-27 LTP development.

Network Seal Widening

- This list continues from that introduced for the current LTP, but budgets and some priorities updated to align with other initiatives e.g. Rolleston/SH1 Access.
- Timing also has revised to align to the NZTA Safe Network Programme and individual intersection safety upgrades – so the full route can be upgraded and completed at the one time.
- 65% of projects now identified as likely eligible for subsidised funding due to the increase in the LC/LR funding limit to $2 million

Rolleston Town Centre Upgrade

- Project timing and budgets established by the RTC Project Manager and the Property Manager reflecting commitments to delivery as discussed directly with Council.
- The bulk of the projects are already accounted for in current LTP, but refined further including funding streams between the current and proposed LTP.
- Includes road, intersections and public carparks with updated budgets and timing.
- Moore St Extension and related works pushed out pending negotiations with the MoE and securing the land needed.
- Additional projects include localised upgrades on Moore Street and Rolleston Dr to align with revised town centre and carpark access layouts, compared to previous versions.

Lincoln Town Centre Upgrade

- The start of the 3 stage upgrade of Gerald St has been pushed out a further 2 years reflecting the continuing work for the Rolleston Town Centre and also some financial management to avoid loading up the first period of the LTP.
- Construction of the public carparks have been advanced and coordinated to occur before any parking is removed from along Gerald St as part of the staged upgrade of Gerald St.
- Budgets have been updated informed by those similar works from the Rolleston Town Centre, with some now proposed to be subsidised by the NZTA.
- As of writing Council has received a Plan Change request for an additional 2000 lots south of Lincoln. This could significantly change the operation and characteristics of the existing network, including the town centre, which will need further assessment.

Public Transport and Travel Demand

These projects and programmes originate from Councils coordination with Greater Christchurch partnership transport initiatives and assigned share of responsibilities from:

- PT Futures Business Case
- Travel Demand Business Case
- Mode Share Plan

Aspects include:

- The upgrade of Rolleston and Lincoln bus stops to match proposed ECan Metro Bus service improvements, including existing and new express/direct services
- The establishment of an interim Park N Ride at the Lincoln Events Centre followed by a permanent facility in the vicinity – linked to the Meijer Dr Extension.
- Upgrade of Foster Park - Park N Ride facilities. Coincides with Councils purchase of 100 Broadlands Dr for expanded parking facilities in the area.
- Eventual relocation and expansion of the Rolleston Park N Ride site to Jones/Hoskyns Road after the Rolleston Flyover has been established.
- Council share of costs for joint travel demand initiatives such as for the central city workplaces, public transport awareness and specific district travel planning initiatives e.g. Lincoln University.
- The walking and cycling aspects associated with the Mode Shift Plan has already been accommodated by Council – Walking and Cycling Projects.

As of writing the GC Partnership is reviewing the affordability of the initial PT Futures Business Case. This may scale back or push further out some projects the extent of which is yet to be fully identified. For Selwyn it is our position that the introduction of improved express/direct services coupled with improved Park N Ride is a fundamental part of our transport programme going forward. This will assist in managing transport demands from our high growth urban areas, and provide confidence to other GC partners that we are committed to this, particularly in light of the numerous urban Plan Changes received recently for Rolleston, Lincoln and Prebbleton.

General Other Projects

For those projects that do not fall into a specific group they include:

- Upgrade of Darfield Rail Level Crossings identified through town structure planning work/plan changes from increased network traffic and safety issues
- LED Subdivision Lighting Upgrade (continuation of existing district wide programme)
- Discretionary small bridge replacements
- Tai Tapu Overhead Undergrounding
- Welcome To Selwyn signage renewals
- “Dark Skies” LED future street lighting upgrades in Outstanding Natural Landscaping Areas

Network Seal Extensions

This list continues from that introduced in the current LTP, but some budgets and priorities have been updated.

Road Safety Projects and Programmes

Projects

Derived from the existing subsidised Low Cost/Low Risk subsidised programmes, there are annual discretionary programmes for:

- Intersection seal backs – as identified by the NZTA that should be continued
- Rural Intersection upgrades – safety upgrades at rural intersections, signage lighting etc. (for other situations in the district not covered by the NZTA Safe Network Programme below)
- School Frontage Upgrades – upgrade of 14 school frontages over 3 years

A new addition for the proposed LTP is the NZTA Safe Network Programme (SNP) of initiatives and projects that Councils are required to undertake to meet new national "Road to Zero" objectives. An initial 9 year programme has been established with the NZTA consisting of speed limit reductions, intersection upgrades and other upgrades to reduce deaths and serious injuries at key locations.

The 2021-2024 SNP has already been negotiated and approved by the NZTA for funding. As discussed earlier, the intersection upgrades in these programmes have been timed to coincide with seal widening projects so that a route can be fully upgraded all at the one time.

Behaviour Change Programmes

Councils Road Safety Behaviour Change programmes is delivered by the Councils road safety coordinators. 2021-2024 has a large emphasis on intersections, mature drivers and young drivers. As aligned with the latest Communities at Risk Register, specific attention has been given to the area of intersections. Additional focus will be given to creating more media types to educate and increase awareness of the risk that rural intersections pose. This aligns with the programmes overall emphasis on upgrades at intersections described above.

With the introduction of the Driving Skills Refresher course and subsidised refresher driving lessons on offer for drivers 65 years and over, there has been more emphasis given to the area of Mature Drivers. The expansion of Young Drivers to cover all drivers at a learner ability (including migrants) has also resulted in growth to this focus area to allow for additional mentor/training programmes. The increase in consistency and variety of educational courses that will be on offer in the Selwyn district highlights the Road to Zero focus area of driver licensing and training.

The increase in funding mainly reflects the introduction of a cycle skills programme which will be introduced into urban schools. This programme aims to increase confidence and ability to in turn increase likelihood of utilising cycling as a form of transport. Extra funding has also been allocated for growth and more consistent running of educational courses and programmes for residents.

8.7 Liveability Assets

Council's goal for the Liability (Community Facilities) activity is:

"To provide community, cultural and recreational facilities that enhance the health and wellbeing of the district's communities and improve the overall quality of life for residents and, to effectively manage Council's property portfolio". In developing this infrastructure strategy the following specific issues have been identified:

New facilities - what community facilities will serve the population best?

- Focus on quality rather than quantity
- Demographic change meaning different demands for facilities

Key Drivers Underpinning the Plan Direction

In preparing the draft Community Facilities Activity Management Plan staff have undertaken an assessment of issues, challenges and drivers influencing the services and have taken account of the following factors:

- Impact of growth as reflected in the growth model;
- Implications of allied strategic documents including the Open Spaces Strategy, Community Centres, Halls and Libraries Network Plan (draft), and Community Pools Network Plan (draft);
- Indications on levels of service from residents surveys, focus groups and an internal review of levels of service and performance measures;
- The increasing urbanisation of the district and related service expectations;
- Information received from committees in preparing reserve management plans;
- The arrival of new recreation activities and changing trends;
- The transition of service delivery from volunteer resources to contractors and caretakers;
- The reducing ability of sports clubs to meet costs of asset renewal;
- The impact of the reserves maintenance contract review and implementation;
- The risks to Council in delivering the services;
- Identification of significant projects needed to support services into the future;
- Climate change impacts and adaptation measures;
- The impact of COVID-19 on services, assets and programmes;
- The impact of new facilities and the cost to operate these;
- The information captured on assets supporting the services (condition, performance and utilisation) and what this means in terms of renewal programmes;
- Legislative changes and the impact on services;
- The need to achieve affordable, sustainable and efficient provision of services.

Community Facilities will play an integral part in continuing to create a good living environment and quality of life for residents. Facilities will be needed to meet the service expectations of communities as they evolve and to support and sustain on-going growth. There will be a careful balancing act required to ensure that facilities and services can be provided to meet needs but this is delivered in a way which is affordable and sustainable.

Impact Of COVID-19

COVID-19 has impacted directly on services covered under the Community Facilities Activity where, under the alert system, public access to facilities and reserves has been closed or restricted. Additional hygiene and safety measures has been necessary in order to deliver services and activities. It is unclear what the future impacts will be on assets and services but protocols and procedures are in place that can be readily activated as required in response to central government directives.

COVID-19 has affected, and will likely continue to affect, household and business finances as well as Council revenue and costs for some time. Given this scenario and clear anxiety in the community around financial uncertainty it is important that programmes are put forward in the LTP that are essential and defensible to maintain assets and services without adding unnecessary costs to ratepayers. In preparing the financial programmes for the Community Facilities Activity Management Plan staff have been cognizant of this situation and have adopted a constrained approach.

Levels of Service

Levels of service for the Community Facilities Activity have been developed and adjusted over time based on community feedback from focus groups, annual resident surveys and information received via planning work. Levels of service including provision standards also consider national standards applicable to parks and open space assets developed by the NZ Recreation Association. The following table sets out a summary of feedback received from focus groups as part of developing the current Community Facilities Activity Management Plan.

Service	Average Satisfaction Rating Out of 10	Current level of spending
Reserves	6.9	Even support for about right and spending more
Community Centres & Halls	7.3	About right, some support for spending more
Swimming Pools	6.7	About right
Cemeteries	8.2	About right
Public Toilets	4.2	High support for spending more

Commonly in the Annual Resident's Survey there is a high level of satisfaction with the Community Facilities services measured through that process and these levels have generally remained relatively static. This, along with information captured through the focus group sessions and other consultation, suggests that overall the levels of service provided are about right but there are some areas where improvement could be warranted.

The early consultation survey and charrettes undertaken in late 2020 as an input to development of the 2021-31 LTP provided some useful information on willingness to pay and importance of services to the community. This showed that there was, in particular, a preference for spending more on activities for teenagers as well as continued support for spending on parks, sports fields and playgrounds. There was less enthusiasm for spending more on pools, community centres and libraries.

With the growth in district townships and the shift to more urbanised environments there is an expectation to have access to facilities that are generally available in urban settings. This means there is a need to consider provision of facilities that offer new or better services to communities. The draft Community Facilities Activity Management Plan endeavours to reflect desired levels of service as indicated by feedback but this needs to be tempered with the community's willingness to pay.

Level of service statements and accompanying performance measures have been reviewed for each service area. There have been some adjustments made to targets to reflect current and forecast performance and some new and more meaningful measures have been introduced as part of a combined Council/staff review process.

Headline Challenges and Issues

The key challenges and issues that have been identified that will impact on the Community Facilities Activity over the ten year planning period are outlined below.

Recreation Reserves and Domains

Issue	Transition from Committees to Contract
Preferred option:	Undertake a review of mowing grades to ascertain if there are any opportunities for cost savings. Manage and allocate sports fields on a network basis and, over time, identify opportunities for consolidation.

Recreation Reserves

Issue	Impact of Extensions and New Developments on Operating Costs
Preferred option:	Retain the current budgets but monitor demand and review timing for developments on an annual basis and make adjustments as part of future Annual Plan/LTP processes.

Township Reserves –

Issue	Managing Growth and Costs
Preferred option:	Continue to investigate different soft fall products and techniques for extending the replacement time. Review the replacement cycle period based on this work. Undertake a critical review of playground provision to identify sites where decommissioning/removal may be a possibility at end of asset life.

Maintaining the Tree Resource

Preferred option:	Continue with systematic and programmed approach to tree maintenance. Ensure tree selections are suitable for the site and are not species that will create maintenance issues in the future.

Drinking Water Standards Compliance

Preferred option:	Obtain expert advice on water supply treatment and monitoring requirements for each site and adjust the programme accordingly

Accessibility Charter Actions

Preferred option:	Undertake the planned accessibility audit to obtain a benchmark of the current situation and identify improvement opportunities that can be implemented on a priority basis.

Climate Change Adaptation Actions

Preferred option:	Incorporate climate change adaptation actions as identified as these are generally not significant and utilise existing budgets and will avert future costs where assets may be adversely impacted by climate change (if no action is taken).

Community Centres and Halls

Issue	Costs for New Facilities
	Options to reduce budgets for new or upgraded facilities are relatively limited as Council is committed to opening these facilities and providing the level of service expected by customers. Building maintenance contributes to the overall costs required to provide these facilities and, although frequency of routine or cyclical maintenance work could be reviewed `this is not recommended as it would lead to building performance issues and longer term cost implications.

Club Assets

Issue	Requests for Financial Support
Preferred option:	Work with the codes to understand their priorities for investment (key sites). Rationalise investment in some sites where there is an alternative facility in close proximity. Remove unsafe structures and work with the clubs on alternative venues or replacement facilities. Charge for lights/specialist facilities where these are primarily funded by Council via seasonal ground rentals (as per the Reserves Charging Policy). Review investment and budget as part of the Annual Plan process once additional information and direction on priorities is understood.

Sports Courts

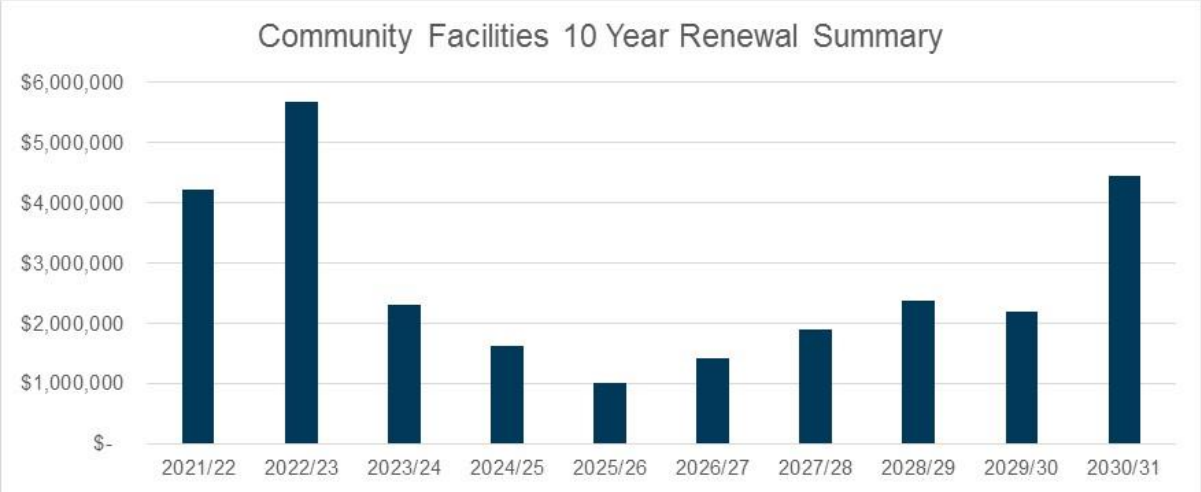
Issue	Cost to Resurface
Preferred option:	Undertake an overall review of court facility provision with a view to rationalisation over time (depending on the levels of utilisation and club/code priorities). Consider decommissioning township courts if they are not well used and no longer valued by communities.

Implications of the Charging Policy for Reserves

Preferred option:	Implement the reserves charging policy based on the indicative charging approach and fee levels outlined in the draft “Reserves Charging Policy” and include information on this in LTP consultation document as well as the revised fee schedule.

Renewals – Financial Impacts

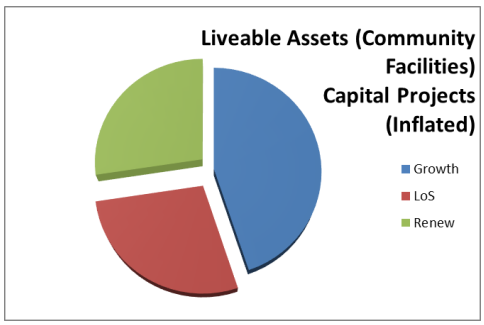
The overall requirements for renewal expenditure are expected to increase over the 10 year period. This is a result of the increasing asset base and many asset types reaching the end of their economic lives. This is evident with buildings (especially internal fit outs and heating systems), playgrounds, court facilities, pool plant and equipment, car park/driveway surfaces reserve toilet facilities etc. Summary renewal costs are indicated for service areas in the report where these are of concern. The graph below shows the forecast over the 10 year period. The high level of expenditure in 2022/23 relates to the replacement of Leeston Library building.



Preferred option: Undertake renewals at the scheduled time to ensure services continue and to reduce repairs and maintenance costs but review on-going asset requirements at the time of renewal and decommission/remove those that are no longer needed.

Key Projects

Numerous significant project are proposed as detailed below.



District Park Development

Council purchased the land for a large scale park (100 hectares) to provide future space to accommodate a range of sports, recreation and community activities. This site, on the eastern edge of Rolleston, has strategic advantages in being centrally located and close to major transport links. This park will cater for district-wide recreational/community activities that may not be available in more urban open spaces.

Planning for the park will start in 2021/22 but development is not programmed to start until 2024/25. This allows time to complete planning and designation processes and fully understand the key uses and the future interface with neighbouring land. Suggested uses include: major events, community gardens, a farm park, equestrian activities, mountain biking, ecological restoration areas, and a future hub for major sports/recreation activities.

Budget	Timing	Funding Plan	Comment
$18.1 M	2024-30	Development Contributions $16.3m Reserves Rate $1.8m	Budget allows for staged development of a total of 30 ha

Rolleston Town Square Development

The construction of the town square as part of Rolleston Town Centre development and as outdoor community space to complement Te Ara Ātea. This project was included in the 2018-28 LTP but the scope of works has increased considerably as the town centre plans have been developed in more detail. The work involves the creation of a high quality formal space which includes: paved promenades to connect buildings; shade structures; water features; public seating; performance space/equipment and an overhead light system.

Budget	Timing	Funding Plan	Comment
$6,400,000	2021/22- 2022/23	Development Contributions $2.6m General Rate $3.8m	Note that some design costs have already been incurred for this project

Birches Road Park Development (Prebbleton)

The development of the 22 ha park situated on Birches Road, Prebbleton. Consultation on the design for the park has been completed and the final design adopted. The designation has now been completed. The first stage of development covers around 12 hectares and includes most of the key supporting assets such as car parks. Stage 2 (10 hectares) is planned to start in 2026/27.

Budget	Timing	Funding Plan	Comment
$10.4 M	Stage 1 2021-24 Stage 2 2026-28	Development Contributions $9.7m Reserves Rate $0.7m	Budget allows for staged development of 22 ha park Opex increases from $133K in 2021/22 to $240,500 by 2026/27

Darfield Pool – Future Provision

A preliminary study has been carried out to assess the requirements for aquatics / recreation facilities in Darfield and the wider Malvern catchment. This work was prompted by the declining condition of the existing Darfield Pool. Initial findings suggested that with, the relatively low use of the existing pool coupled with the population numbers within the catchment and proximity to Selwyn Aquatic Centre, there was insufficient demand at the present time to justify provision of an indoor pool facility. Council has decided to review indoor recreation, including aquatics, provision, later during the 10 year period to take account of forecast population increases and the impact of the Selwyn Aquatic Centre extension and the new aquatic facility being built in Hornby.

In order to signal Council's intent to support future aquatic facility provision in Malvern a provisional budget allowance of $5m has been provided in year 10 of the Long-term Plan and will be preceded by further assessment and feasibility work.

As the existing pool is nearing the end of its economic life, with the pool tank, heating system, filtration and treatment equipment needing replacement, a budget of $1.5 million has been provided in 2021-22 to keep the pool operating in the interim.

Budget	Timing	Funding Plan	Comment
$5 M	2030/31	Funded from borrowing with the costs met from the pools rate	Provisional budget subject to feasibility study and further planning

Leeston Community Facility and Library

The project involves the construction of a combined community centre library facility. The library space would be around 600m2 with adjacent community spaces. Key aspirational aspects of the project include:

- A facility combining library (arts, culture and lifelong learning services), Council service centre and community recreation and meeting spaces creating a vibrant community hub for Leeston. The mix of uses and spaces needs to reflect the network requirements and create a point of difference.
- Preference for a central location for the community facility which is accessible and has a presence in the township and a location where community activity is already present and can be built on would help to create a community focal point for Leeston. Leeston Park was the preferred location in the needs assessment work and offers the potential for connecting both indoor and outdoor activities.
- The notion of creating a community focal point needs to embody 'Community Development' and be located 'Where the People Are', as well as being accessible, well designed and equipped, incorporating art plus be social and activated to cater for the spectrum of community users.
- The community facility and spaces need to reflect their surrounding community and the cultures within it. There is an opportunity to recognise and connect to the cultural narrative of the locality especially in terms of the proximity to Te Waihora

and Te Taumutu Marae (Te Pā o Moki). This could be by way of design elements, stories, displays and outreach cultural activities.

- Acknowledgement of and, where appropriate, integration with other existing community buildings is an important consideration. This is in terms of ensuring the use of existing facilities is not undermined and that, where new facilities are positioned in close proximity to existing buildings, they are complementary and suitably linked.
- Where facility sites are adjacent to heritage items/buildings there is the potential to enhance and showcase the heritage values and increase community appreciation and utilisation.
- Consideration should be given to how the site options for the community facility could be better connected to the commercial part of the town to help support business activity.

Budget	Timing	Funding Plan	Comment
Community Centre			
$4.4 M	Design 2021-22 Construction 2022-23	Community Centre component of the facility - $3.9m funded by borrowing serviced from the Community Centres rate and $0.5 funded from Development Contributions	Budget covers 300 m^2 build plus land costs and contribution to indoor court
Library			
$4.47 M	Design 2021-22 Construction 2022-23	Library component of the facility - $4.47m funded by borrowing serviced from the Libraries rate	Budget covers 600m^2 build
Total Project Cost			
$8.87 M			

Leeston Medical Centre

The construction of a new purpose built medical centre to service the Leeston community. The facility would be a standalone building to house the existing medical practice with potential to extend or add other complementary facilities in the future. The construction of this facility would be viewed as a commercial investment with cost recovery of the build and operating expenses from a lease agreement.

Budget	Timing	Funding Plan	Comment
$1.86 M	2021/22	Fully funded from lease rentals	Project has been included in year 1 as there is a desire to move the facility out of the current EQ prone premises as soon as practicable

Hororata Community Centre

Council is planning to build a new purpose-built facility to be located on the reserve. It will provide community space, support recreational use of the reserve and create a focal point for the local community. When the new facility is built, the Council would not continue to support the existing hall and this may be transferred to the local heritage group. The new facility will not

be as large as previously proposed, considering the size of population in this area, the low use of the existing hall, and proximity to other Council-owned facilities, such as Glentunnel Hall.

Budget	Timing	Funding Plan	Comment
$3 M	2021-22 Planning 2023/24 Build	Community fundraising $2.0m Community Centres rate $0.4m Development Contributions $0.3m Land sales $0.3m	The project is dependent on a significant contribution from community fund-raising

Hockey Turf Provision – Foster Park

The installation of a full sized water-based artificial hockey turf at Foster Park. The project includes lighting, fencing, drainage and irrigation. The turf will supplement the existing small junior turf facility built to enable junior hockey players to 'play and train locally'.

Budget	Timing	Funding Plan	Comment
$2.5 M	2021/22	Development Contributions $1.6m Reserves Rate $0.9m	Note that there is an on-going maintenance cost of around $25,000/yr and a cost to renew the artificial surface which equates to around $50,000/yr – It is expected that a portion of these costs will be recovered from user revenues

Property Commercial Investment

Council wishes to consider commercial property investments on a case by case basis and the council's commercial property strategy is the appropriate investment tool to guide the council's decision making. There are likely to be property investment opportunities arising over the 10 year planning period that Council may consider and, in particular, this relates to commercial investment associated with existing land holdings in Rolleston (adjacent to Rolleston HQ site and in the town centre).

Budget	Timing	Funding Plan	Comment
$30.0 M	From 2021-2026	The capital cost would be debt funded. The cost of the interest on the debt and the debt repayments would be repaid by rent payments from leases	It is noted that any investment proposals will be subject to a comprehensive business case and approval by Council.

Recreation Reserves

Strategic Direction

The strategic direction for this activity is, to a large extent, guided by the Open Spaces Strategy and the implementation of this forms the basis of projects and programmes completed over the last 3 years and those going forward over the next 10 years. Key elements are:

- Land has been acquired to meet future sports and recreation demands e.g. Large Scale Park; Prebbleton, Kirwee, Southbridge, Leeston;
- Staged development of outdoor sports and recreation facilities (total 64.5 ha), with significant future developments planned at Kirwee, Leeston, Lincoln, Prebbleton, Rolleston, Southbridge and West Melton;
- Improving the quality and standards of recreation reserves to meet customer expectations e.g. improved playing fields (irrigation and lighting) and upgraded toilet facilities;
- Ensuring asset renewal programmes are implemented and provide safe and serviceable environments for reserve users;
- Working with partners to protect and enhance natural areas and to provide opportunities for natural resource recreation e.g. Yarrs Lagoon and the planned Large Scale Park.

Key challenges

Keeping up with demand for sports and recreation space (traditional sports and other more niche recreation activities): Population growth and the arrival of new activities placing increasing pressure on space means that provision of additional space at the right time is imperative.

The change in some sports models, with several codes showing increased demand for modified forms of the game (e.g. shorter formats – 10's cricket leagues) and/or a movement away from traditional playing schedules (e.g. week night rugby games). The main driver for this is to help retain or increase participation. This has resulted in requests for additional and improved facilities, specifically sports field lighting to a match play standard.

Changing service expectations: The change in some parts of the district from rural to urban has brought with it changing expectations in terms of levels of service. There is now an expectation that the quality of facilities provided will be comparable with those provided in a city environment. This has implications from both a capital and operational cost perspective. Relevant to this, the 10 year plan includes a continuation of scheduled reserve toilet upgrades and a programme for improved sports turf maintenance standards (for higher use reserves).

Transition of service delivery from volunteer resources to contractors and caretakers managed directly by Council: Although a local management committee approach has worked well in the past, there is evidence of some committees struggling to provide the necessary resources or recruit new volunteer members. The need for committee involvement in aspects of reserve operations and grounds maintenance has also reduced, with contractors and reserve caretakers now reporting directly to Council (due to legislative changes and associated risks to Council needing to be effectively managed). In some cases, grounds maintenance has been absorbed into the reserves maintenance contract with SICON Ltd. and this trend is likely to continue

Affordability and cost of operations: The increasing cost of asset renewals in recent years and a reducing ability of sports clubs to meet these costs. In some cases maintenance and renewal works have been deferred. There has been an increase in requests for financial support to replace 'club-owned' assets. This is a complex issue, in part, due to the ad-hoc approach taken to fund other similar renewals in recent times.

The impact of the reserves maintenance contract review and implementation. With the maintenance of some recreation reserve grounds now under contract there are additional costs being incurred for some maintenance activities, especially with mowing and toilet servicing, and where this was previously undertaken on a more volunteer basis.

The impact of planned reserve extensions and new developments, and a corresponding increase in operating costs.

The impact of improved service levels and the associated cost to deliver on these (e.g. automated irrigation systems, and increased sports turf maintenance standards and renovation programmes).

Funding capital programmes: There is an extensive capital programme planned and to fully fund this will present a challenge to Council. As many of the projects are growth related there is funding streams via reserve development contributions available which helps to reduce the impact on other funding sources.

Reserves strategy and policy work: The need to review or progress key strategy work to provide better direction and consistency, particularly around the allocation and provision of reserve facilities and defining priorities for future investment. This includes a fees and charging policy and a need to rectify existing anomalies and implement a standardised set of reserve use charges that are consistent, fair and equitable.

Freedom Camping Impacts: An influx of visitors to the districts rural recreation reserves which allow for freedom camping has, over the past three years, placed pressure on assets, services and the environment. The impacts of the global pandemic and restrictions on international travel has placed some uncertainty on this activity within the short term and, although international visitation has diminished, it is likely that this will be substituted to some degree by an increase in domestic visitation as the population looks to more local options for holidaying and camping. It is expected that international travel and demand for freedom camping will at some point resume, and this creates additional costs to Council in terms of servicing, management and control.

There is a high level of satisfaction with this service and the level has been sustained over the last few years.

Cemeteries

Strategic Direction

Council's strategic direction in relation to the activity is to ensure there is sufficient provision of cemeteries to meet community requirements. This is in terms of:

Capacity for future burial requirements;

Distribution to ensure communities have access to a cemetery;

A range of burial options are provided for;

Cemeteries are maintained and developed to the standard expected by the community

There is no dedicated cemetery for Rolleston at the present time and the desire for this facility has been expressed via a number of planning exercises. The draft Community Facilities Activity Management Plan does not provide for development of a cemetery in Rolleston at this point in time as it is adequately serviced by both Springston and Shands Road cemeteries that are located in relatively close proximity to the township. This matter will be reviewed in the future as Rolleston grows to gauge demand.

Key challenges

Cemeteries Capacity – The death rate is projected to gradually increase which will impact on cemetery capacity but, overall, there is sufficient space to accommodate this situation. It is expected that space for full burials will be exhausted at Prebbleton Cemetery and Weedons Cemetery during the 10 year planning period. It is anticipated that demand for both of these cemeteries will be absorbed by the nearby Shands Road Cemetery which has significant capacity available (50 years plus). Burial space in the developed part of Ellesmere Public

cemetery will also be consumed in the near future which requires development of a further burial area (in 2021).

Burial Trends – There is a gradual move toward a greater proportion of ashes burials although the ratio is still significantly in favour of full burials in Selwyn District. It is expected that, as the towns grow and become more urban in nature, the preference for ash burial will increase. Council will need to develop cemeteries in the future to cater for this demand.

Changing Customer Needs – It is evident that there are changing needs in terms of burial choices, memorial types and provision of ornamentation and other remembrance requirements. This is partly attributable to the changing ethnic composition of the community. It is important that Council responds to this need in the way it designs, develops and manages cemeteries in the future.

There is reasonable level of satisfaction with cemeteries, although there was a notable drop in satisfaction in 2018. This may have been influenced by a review of the Cemetery Bylaw in that year, with subsequent enforcement of some sensitive matters such as non-complying adornments.

Public Toilets

Strategic Direction

Council's strategic direction in relation to the activity is to ensure the network of public toilets provided meets the obligations under the Health Act and meets the standards expected by users. This includes:

Providing sufficient toilet facilities to meet the needs of townships, rural recreation users and visitors to the district

Provision of toilets on main highway routes at reasonable travelling distances to adequately provide for comfort stops

Provision of toilets with adequate capacity to meet peak demand times

Provision of toilets in areas where there is a high level of tourist activity

To complement facilities provided by other agencies

The standards and comfort levels provided matches the site and level of use

Protecting the health of the community

Ensure the facilities provide a safe environment for users

Ensure the environment is protected and that any adverse impacts resulting from the management and maintenance of public toilets is minimised

The frequency of inspections and cleaning ensures public toilets are maintained to an acceptable level of hygiene

Ensure public toilets remain serviceable and available for use

In responding to these service drivers Council has been investing in the improvement and expansion of the public toilet network and plans to continue to support this programme over the next 10 years.

Key challenges

Meeting the needs created by the large increase in visitors: This issue has largely been addressed in recent years with significant improvements to Council's public toilet network, and with support from the Tourism Infrastructure Fund. However, the investment in new infrastructure will have an ongoing impact on operational and maintenance costs. The impacts of the global pandemic and restrictions on international travel has meant that overall

demand on this activity has decreased, at least in the short term. It is however, expected that the levels of visitation pre-pandemic will at some stage return along with demand for public amenities and although there are no outstanding significant capacity issues identified over the next ten years, there will be a need to continue to maintain services and the standard of facilities.

Issues with ongoing operational and compliance costs: There will be ongoing and significant operational costs associated to maintain standalone waste water systems (water services contract) and servicing toilets (parks and reserves contract), including ongoing compliance costs associated with onsite waste water systems (non-reticulated). The influx of visitors to the district places extra demand on toilet facilities and this creates additional costs to Council in terms of servicing. Council has applied for and received funding via the Tourism Infrastructure Fund to assist with operational costs and, so long as this fund is available, Council will continue to seek this funding assistance.

Council has increased provision of effluent dump stations at key locations across the district and further funding has been allocated within the 10 year plan to continue this programme. The key driver for this is to keep pace with increasing tourism numbers and current trends in self-contained camping/transport. A key challenge for Council is finding a means of recouping the cost of waste disposal at sites where these are not on a reticulated system.

Understanding levels of use: There is an ongoing need to monitor levels of utilisation to determine periods of peak usage and optimise servicing regimes etc. Data is currently being captured at two of the four Grade 1 sites. Depending on the success of these, further counters could be installed to gain a better understanding of utilisation at other sites and grades.

Township expectations – Some townships have an expectation of public toilet provision to service a perceived need. Generally these are requests for a facility in lower populous areas where there are currently no other suitable public or privately owned facilities available. Council needs to carefully consider actual demand against affordability in these cases.

Customer satisfaction remains above the target performance level, despite some minor fluctuation

Swimming Pools

Strategic Direction

In 2020, the Aquatic Facilities Plan (2008) has been reviewed and the updated draft version provides guidance on key priorities for aquatic provision in the future. Strategic direction for the provision of swimming pools from 2021 can be summarised as follows:

1. **Selwyn Aquatic Centre:** This is a district level facility providing all year access to aquatic activities. It has a very high level of use and to address capacity issues Council agreed to plan for the expansion of the facility to meet community expectations and population growth. The extension work incorporating a new 10 lane, 25 meter pool and repurposed programme lane pool will be completed in March 2021. This will provide opportunity for improved provision of aquatic activities including aquafitness, casual swimming, deep water and other activities. Investment will be required through the 10 year planning period to refurbish and renew assets at SAC to ensure the quality and serviceability of the expanded facility is maintained. Throughout the extension project, a number of issues were identified and rectified in relation to the air pressure of the facility including rusting roof bolts. In the first year of the LTP there are funds to install internal doors and upgrades of heat exchangers to further manage air pressure and to replace the soffits damaged by condensation.
2. **Sub-district Pools:** Continue to strengthen and enhance the ‘core network’ pools including Southbridge and Darfield Pools. Darfield Pool is nearing the end of its

economic life with the pool tank, heating system, filtration and treatment equipment needing replacement. A study has been carried out to understand the demand for pool facilities in this locality. At this point the demand profile does not support investment in a new indoor facility. Council has, therefore, decided to provide funding to extend the life of the existing pool and improve the swim experience for users. This will enable time to reassess requirements for indoor recreation / pool facilities in the Malvern area during the 10 year Long Term Plan period. A provisional budget is included in 2030/31 for anew pool and this will be preceded by further planning work to define specific requirements. Southbridge Pool will continue to have a level of investment that sustains the current facility and service standard including a heating upgrade to improve user experience. This facility has around 15 years of life remaining and it is planned to undertake a feasibility study (including site and option analysis) for the provision of aquatic facilities in the Ellesmere ward.

3. **Provision by Other Agencies:** Christchurch City Council are currently building a new aquatic facility in Hornby which is likely to provide service for part of the district's catchment (particularly Prebbleton). This pool is likely to include leisure and water play facilities which will assist with the current under supply of this type of space currently in Selwyn. There is no intention to duplicate these in Selwyn District facilities in the short term but this will be raised as part of the next LTP once additional supply beds in. Burnham Army Camp have indicated they intend to upgrade their aquatic facilities in the future but this is likely to have minimal impact on the aquatic network utilisation as this will be mostly used by military personnel and those associated with the camp.
4. **Community Pools Support:** Support for the community pools that provide local seasonal access for residents is planned to continue. However this will be dependent on these pools being able to operate safely and with sustainable investment. In circumstances where pools, cannot operate safely via local committee management, require significant capital investment to achieve compliance and there is a low level of community input and support, Council will need to consider their continued operation as occurred with Prebbleton and Courtenay pools. Council has passed a resolution to consult on the future of the Halkett Pool that has been closed for the 2020/21 season due to health and safety and legislative non-compliance concerns. The pool at Sheffield will continue to be maintained, but the pool tank is near end of asset life and will require a significant investment for long term provision. The long term future of the Sheffield pool will be reviewed post the Darfield pool development. The Leeston pool will continue to be maintained, with its long term future considered as part of the Ellesmere ward aquatic provision study.
5. **Pool Management and Safety:** Council will continue to enhance safety and supervision of local seasonal public pools. This includes the continuation of lifeguarding to Sheffield Pool. The core pool network of (SAC, Darfield and Southbridge) have achieved Pool safe accreditation and this will require some investment in plant to ensure continued compliance with this accreditation. Further technical support and training on pool operation and practice will be provided for the community pools.
6. **School Pools Support:** Council has resolved to provide assistance for school pools by way of an annual operating grant where those pools are available to the local community and meet safe operating criteria. It is intended that provision continue to be included in the 2021 - 2031 LTP. There have been inquiries as to whether SDC could provide life guard support at Lincoln High School pool and a trial of this service is being considered.

Key challenges

SAC capacity: The current extension project has addressed the lane swimming capacity, but as a result of the growing and changing community the leisure area is oversubscribed and the next LTP will include recommendations for the expansion of this area.

Sheffield Pool: This pool is adequately heated and treated to industry standards but continues to experience low visitation numbers as well as requiring significant spend on the

pool tub in the short term to keep it operational. Due to its depth it requires the provision of lifeguards and there are issues with the disposal of the waste water. Closure of Sheffield should be considered once an improved service provision is in place in Darfield and as part of the wider aquatic facility provision in the Malvern Ward.

Overall pool provision: Due to estimated projections in population growth the demand for additional or improved pool facilities will increase across the district over the next 20 years. Based on current population projections, if the current supply of available water space was not increased over the next 20 years then the district would have an under supply of warm, fit for purpose pool space.

Network Level of Service: The overall network across the district is predominantly "old and cold" with the average age of pools being over 40 years of age. Other than the SAC there are no pools in the district that can meet the industry standards for filtration, water temperatures, and filtration turn-over rates for different types of pools. This makes them unsuitable for range of programmes especially for Learn to Swim or sessions for senior citizens who prefer warmer pool temperatures. Both Darfield and Southbridge pools have achieved pool safe criteria but they will required continued investment in on-going upgrading, renewal and maintenance programmes. Upgrades or construction of a new facility at Darfield must comply with current pool design standards. This would include heating. Southbridge pool has heating upgrades included in the first year of the LTP.

Health and Safety at Work Act (HSWA) 2015: This legislation came into effect on 4 April 2016 and although there is a degree of uncertainty regarding aquatic industry practice in managing risks it is incumbent on Council to ensure the pools are managed and operated in a way that provides a safe environment for users. This inevitably leads to increased costs to manage risk at community pools.

Health & Safety Compliance Audit: An audit undertaken in 2016 identified that many of the pools had significant areas of non-compliance based on industry standards and three of these (Courtenay, Halkett and Killinchy) were rated as "high risk" in terms of potential incidents or accidents occurring on site. Since then an annual report has been presented to the Audit and Risk Committee on the current status of all community pools. Courtenay Pool did not open for the 2016/17 summer season and has subsequently been demolished and closed. Halkett is closed for the coming summer season. Rectification work to improve compliance has been carried out but this requires on-going inputs and costs to achieve. Killinchy has made significant improvement in record keeping and compliance testing but overall pool utilisation is very low.

Customer Experience: This is variable and is very pool specific largely due to the asset condition and how the facility is operated with some pools offering a very limited user experience. The facility mix at the SAC has some limitations, in particular during periods of high demand and for youth age residents. There are several relevant community requests including: more pool space, more variety of pool depths and temperatures, Café, Hydroslide, outdoor pool, play and BBQ area and fitness gym and relaxation facilities (spa/ steam/ sauna).

Over the past three years the level of satisfaction by users has remained consistent for Council managed pools but has declined for community managed pools

Community Centres & Halls

Strategic Direction

The Council is committed to the provision of a network of community centres and local hall to service the needs of localities across the district. Council adopted the Community Centres and Halls Strategic Plan in 2013 which proposed a number of changes to the way this activity was delivered and provided a framework for strategic direction. This plan has been refreshed with a review undertaken in 2020 and the draft 'Selwyn Community Centres, Halls and Community Libraries Network Plan' produced. In addition, the Community Spaces Plan adopted in 2017 sets guiding principles on how community space should be developed and used.

Selwyn Community Centres, Halls and Community Libraries Network Plan Principles: The key focus of this plan is to create an integrated and complementary network of facilities that are fit-for-purpose, well used and valued by communities. The emphasis is on quality rather than quantity. The principles underpinning the plan include: Fit for purpose facilities meeting an identified need, sustainability (consideration of whole of life costs), partnering / collaboration / co-ordination in provision, co-location and Integration, future proofing/adaptability, accessibility, reflecting the community, and activation/optimising use.

Service Delivery and Programming: Direct service delivery via keystone facilities will occur including at Te Ara Ātea (once opened). Capability to support the extension of its keystone facility-based programmes, events and services out into the various hub and local facilities in the network will be developed. District-wide programming as well as a more centralised community facilities bookings system has been progressively implemented over the last few years. This is aimed at promoting, increasing and coordinating programme delivery and bookings and will continue to be rolled out to facilities across the district. Where other groups are managing a facility this will be guided by formal service level agreement that clearly sets out the responsibilities of all parties. Some facilities may be suitable for mixed-mode delivery (Council programmes, vessel for hire, community initiative programmes and casual use). This could include a number of different occupation and use arrangements.

Future Investment in Facilities: Strategic investment in new and upgraded Community Facilities will be subject to sound feasibility assessment and evidence of community need and will consider the following:

- Opportunities to partner with organisations that lead to high levels of community activation and sustainable best practice asset management.
- rebalancing the network through fewer new builds of generic community space and more special purpose spaces targeted at particular specialised needs add complementary activity spaces (within a particular geographical area, cluster) that reflect community demand
- ensuring a mix of provision is available within the Network in terms of single-use and multi-use spaces; specialist spaces for crafts, arts, active recreation, education, health and well-being, as well as general purpose spaces for meetings and public assembly
- consolidating spaces within a geographical area (cluster), or introduce new provision to address an identified gap

New Facilities: The plan contemplates that a number of new facilities will be required over the 10 year planning period to ensure demand from growth is met and levels of service are maintained. Subject to demand assessments confirming requirements, this includes facilities at Leeston (combined with a library) and Prebbleton. There are also plans for a new facility to service Hororata and this proposal needs has been carefully reviewed in consideration of demonstrated demand, existing facilities nearby and community views. This has resulted in the scale of this facility reduced and is reliant on a substantial contribution from community fund raising.

An approach with new community centres is to have these located in community hub areas such as reserves to consolidate activities into a single venue and obtain advantages of

shared ancillary facilities. This approach also provides an opportunity for greater utilisation of facilities where they are located alongside sports and recreation activity. Both the planned facilities for Leeston and Prebbleton may be located on reserves.

Maintaining Local Halls: The plan continues to support the upkeep of halls that service the smaller and more remote communities. However there may be some facilities where, because of declining use and the need for significant capital expenditure, a decision on continued investment is required. The 'Selwyn Community Centres, Halls and Community Libraries Network Plan' proposes that Council decommissions or divests involvement in Council owned community facilities where utilisation is low, interest in community ownership is low, the facility is not fit-for-purpose and requires significant capital investment to address this and/or building compliance and renewal requirements. This situation will be monitored over the next few years and any proposals for facility retirement or rationalisation will be considered as part of the subsequent LTP cycle.

Impact of New Facilities: This new indoor sports complex will be opening in 2021 and planning for space allocation and activity use suggests that this new facility will be heavily used. Te Ara Ātea is also set to open later in 2021 and will provide a range of spaces for community uses and activities. The full impact of these new facilities coming into operation is difficult to gauge at this point in time especially in regard to utilisation of existing facilities such as the Rolleston Community Centre (RCC). There is likely to be some residual activities that will not transfer from RCC and may require space. A needs assessment for the future use of RCC indicated a strong preference for a space to accommodate arts and culture activities including performing arts. Given the uncertainty of the impact on community space as the new facilities are opened it is planned that RCC continues to provide space in its current form for a range of activities that could include arts/performing arts until the usage patterns are fully understood. Use of RCC can be managed as part of Te Ara Ātea operations at least as an interim arrangement. No budget for repurposing RCC has been included in the 10 year plan but this will be reviewed at a time when more information on use patterns is available.

Key Challenges

Building Age and Condition: The age profile indicates that many of the buildings are old with only 9 of the 26 facilities being less than 50 years old. Although many of the facilities are maintained to a very good standard there are some where deferred maintenance is evident signalling the need for significant renewal and maintenance expenditure with a total of $3.4 million required for renewal work over the 10 year period.

Utilisation: Averaged out, the network of facilities operates at well below capacity but utilisation varies hugely from below 10% to full utilisation. With this in mind the usage levels should be treated with caution as there are variabilities across the district depending on a number of factors and many of the remote halls have quite a different purpose compared to those in the larger towns. With a change in delivery models there is an opportunity to increase utilisation through district programming. There is also an opportunity to look at divesting Council involvement and transfer of facilities to other entities where this is practicable.

Quality of Facilities: Most of the facilities are in good or very good condition but there are some that have not been modernised or upgraded and the overall quality does not meet modern standards. There is a strong correlation between the quality of the facility and the level of use. This signals the need to focus the network on provision of good quality facilities that are well used rather than a large number of facilities which are of poorer quality and not well used. Council needs to apply a strategic approach in terms of future investment in upgrading facilities to ensure this is targeted to those facilities that will continue to have a role in the network going forward.

Legislative Compliance: Managing buildings has become increasingly complex with the changes to the Buildings Act and other regulations and standards. Keeping up with compliance requirements has been a challenge and many buildings have not been upgraded to meet requirements and will be liable for substantial costs if this is triggered in the future.

Funding New Facilities: The plan proposes a number of new facilities and the funding of these will be a challenge. Where projects have a growth component and are associated with the use of a reserve there is potential to provide some funding from reserve development contributions. Funding from the major grant funders is now scarce and generally the balance required will be from borrowing. However the low interest rates are currently working in Council's favour for the loan component.

Generally the level of satisfaction from hall users has continued to be relatively consistent and close to targets

Property & Buildings including Commercial

Strategic Direction

The Council has an extensive portfolio of properties and buildings that have been accumulated over time from a variety of initiatives. Some properties are the legacy of the previous (in house) service delivery model and others have been recently acquired for strategic purposes. Council has signalled the intent to rationalise some land holdings that may be surplus to current requirements. However it is important to adopt a cautious approach when considering disposal or alternative uses.

The plan indicates commitment to provide a network of buildings of the appropriate size and quality to support service delivery functions. Council has developed a commercial property portfolio and this includes the properties in Izone, farms and the Health Hub (under construction). Council's former Property Committee developed a Commercial Property Strategy to guide investment and decision making.

Strategic direction related to a number of key Council properties is outlined below:

The Breach Block and Adjacent Land: The District Plan provides for this land to be developed for a combination of community and commercial purposes. The Health Hub is currently being constructed and will open in July 2021 with lease agreements currently in place for most of the facility. The balance of the land may be either on-sold (part potentially to NZTA for flyover) or held for development.

Raeburn Farm: This land was purchased for a sewage treatment site to service Darfield. Currently the land is leased for farming purposes and is irrigated via the CPW scheme. Through this LTP the Darfield sewer reticulation will be consulted on, and depending on the outcome of this the farm with irrigation and adjacent house and lifestyle block may be disposed if surplus to requirements.

Wrights Block, Kirwee: This land was purchased to enable the extension of the Kirwee Recreation Reserve which has now been completed. The disposal of the remaining land will be investigated.

Former Lincoln Country Club: – This property is currently commercially leased and the adjacent land being subdivided in preparation for sale and one remaining section being retained as reserve.

Leeston Library and Medical Centre: - The Leeston Library has a number of weather tightness issues. It is connected to the Leeston Medical Centre which is deemed earthquake prone but the medical centre does not pose a life risk to occupiers of the building. It is proposed this facility is demolished and a new multipurpose community centre and library facility built. A new medical centre (with potential for extension if required by demand) is proposed to be built as part of the commercial property portfolio and the lease would fund the cost of this facility.

Te Ara Atea: – The new multi-functional civic space will be completed as part of the Town Centre Development by the end of 2021. Options for the future of the former Rolleston

Library space are being considered as part of proposals to repurpose the adjacent community centre.

Selwyn District Headquarters – Extension work including the development of a customer centre and ancillary services has been completed to meet the growth requirements and increased demand on Council headquarter services in Rolleston. The refurbishment of the remaining pods has been included in the first year of the LTP to complete this work.

Darfield Depot – The depot site is currently leased to FENZ and local community groups. This site is freehold and in the future may be utilised by community groups or considered for disposal.

Heritage Buildings - Council has a small portfolio of heritage buildings and it is intended to retain these and ensure they are maintained in an acceptable condition. The Malvern Museum requires a roof replacement and this is planned in the first year of the LTP. Uses for these buildings are encouraged where it is complimentary to the heritage values.

Surplus Land: Some properties have been confirmed as surplus and staff have been working through a disposal programme of freehold properties. Further identification of properties for disposal will continue and the plan indicates a revenue stream from disposals over the 10 year period. In some cases enhancement of properties may be required to maximise returns e.g. on sell with subdivision consent.

Glentunnel Camping Ground: A lease is in place until 2026 and it is assumed that a lease agreement will be in place after this time. Significant upgrades to waste treatment and amenities have been carried out in the last three years with increased rental to recover this expenditure. The on-going performance of this facility will continue to be monitored.

Key Challenges

Building Maintenance Work: A comprehensive data validation and condition assessment was carried out for all facilities to inform this LTP. There are increasing maintenance costs due to best practice asset management (e.g. building wash downs, gutter cleaning), the servicing of the increased size and complexity of systems such as HEVAC and compliance costs. There will also be additional costs as a number of new facilities come into service with components such as lifts that are new asset types for Council to maintain.

Building Renewal Work: As buildings age, and new facilities are added the renewal programmes inevitably increase over time and this is reflected in the plan. The largest proportion of costs is in relation to HEVAC renewal (average life of 10 years depending on use) and flooring and fit out replacement. Where buildings such as Te Ara Atea have a higher amenity value and utilisation the renewal costs may be incurred over a shorter time period to maintain the standard of the facility.

Rental Housing

Strategic Direction

The Council has a portfolio of rental houses that is largely the legacy of previous Council operational approaches. The houses were, in many cases, provided as accommodation for Council workers (e.g. Water Race Rangers). With most operational services now provided via contractors there has been no reason to retain the houses for their original purpose and a programme of disposal has been implemented. The remaining rental housing stock is, in most cases, located on reserve land and cannot be readily sold. However, there is potential to initiate reserve exchanges or revocation to achieve the freehold status for the land where this is viable. In general, the present management strategy is to rent these properties on the open market. Service delivery of this activity is currently via a Property Management company.

The plan does not consider involvement in rental housing as a core service and indicates a continuation of work on proposals to divest ownership of remaining houses where these are not required and where this can be successfully achieved. The viability of this service reduces overtime as a result of the portfolio decrease (reduced rental) compared with operations, legislative and maintenance requirements. This situation may accelerate decisions and implementation of retention or disposal options.

Houses purchased for strategic reasons can be used as short term rentals for staff or other tenants until such time as the property is required for its intended purpose.

The small portfolio of Elderly Persons Housing Units in Darfield is a legacy of former policy and, more recently, it has generally been Council's policy to promote this type of housing through other agencies rather than act as the direct provider. Council has agreed if the opportunity arises these units may be sold to a community housing provider. It is known that at least one local group in the Malvern area has expressed an interest in acquiring these units.

Key Challenges

Aging Portfolio and Maintenance Costs: The key challenge with rental housing relates to the age and condition of the remaining houses and the cost of on-going compliance, maintenance and renewals which indicate an increasing financial deficit as properties are sold. Further actions will be undertaken to divest ownership of houses where these are uneconomic but this may take some time where they are located on land held under the Reserves Act. The property management company states that Council rental houses are in a suitable condition for rental. However the last condition assessment shows that some are very dated and, in terms of attractiveness for rent and Council being a responsible landlord they may require costly refurbishment such as bathrooms and kitchens, over the next 10 year period. It may be a better economic outcome for Council to consider demolition of houses on a case by case basis rather than continue to invest in maintenance and renewal programmes.

Legislative Change: Since the last LTP, the 2016 Residential Tenancies (Smoke Alarms and Insulation) Regulations have come into effect and from July 2021 the Health Homes Standards will also apply to houses Council provides for rent. The main intent of the legislation is to ensure an improved provision of heating, ventilation and safety in rental houses. All rental properties have been inspected and where required had additional insulation added and now comply with the regulations. Additionally, the renewals programmes indicate where heating and ventilation needs to be upgraded to meet the Healthy Homes Standards which will apply after July 2021 and/or when there is any changes made to the tenancy (excluding rent reviews). The bulk of the renewal programme is in relation to heat pumps and fireplaces.

Heritage Listing: The Blackberry Patch House at Hororata is situated on Reserve (Crown owned) land and received a SDC heritage listing for the building and immediate surrounds in the current proposed district plan. This means additional costs may be incurred in the maintenance of the exterior of the building and grounds.

Gravel Reserves

Strategic Direction

The adoption of the Gravel Management Strategy signalled a major shift in Councils approach to gravel management with a withdrawal of direct involvement with this activity. The focus going forward will be on:

- Ensuring appropriate maintenance and management of operational gravel pits and "ring fencing" remaining aggregate for road maintenance activities.
- Ensuring the pits provide a safe environment for contractors and the public by undertaking safety remediation works or requiring this as part of lease agreements and inspections with a qualified Quarry Operator.
- Shifting the focus to restoration by offering selected pits for clean and low contamination fill to enable sites to be progressively rehabilitated. This also provides opportunity for disposal of material that would otherwise be difficult and costly. Council has agreed for lease arrangements to be put in place for a number of sites where filling will occur.
- Actively restoring some pits to provide for alternative uses including recreation and native revegetation sites. Restoration will be guided by the Gravel Pit Restoration Strategy. Further restoration work at Cemetery Pit will occur over the 10 year plan in an incremental way to enable it to ultimately be opened for public use.
- Disposing of land no longer required for this purpose. The plan anticipates that Council will continue with the current disposal programme noting that 34 sites are already progressing through the revocation process and are with DoC. However DoC has currently paused the process to ensure that it complies with their internal policies.

Key Challenges

The key challenge with Gravel Reserves are identified as follows:

Funding Remediation and Restoration Programmes: This activity has generated income from gravel royalties which has been used to offset operating costs and fund improvements. Surpluses have been transferred to a Metal Pit Reserve account that was set up to meet future restoration costs and this account currently has a balance of over $800,000. Based on revenue streams and expenditure requirements going forward no surpluses will be generated and the fund will be eroded over the 10 year period and will go into deficit.

Health and Safety: Council is obligated to comply with the Health and Safety in Employment (Mining Operations and Quarrying Operations) Regulations 2016. This places some onerous requirements related to site safety and Council has been working through a programme to remediate sites that have unstable pit faces. This work is largely completed on priority sites but there are still some requiring work and some of this will be carried out under lease agreement to Quarry Operators.

Maintenance and Management of Gravel Pit Sites: Although many of the sites will be under lease agreements there will be some residual land parcels that will incur costs for noxious weed and pest control and fencing/gate maintenance.

Availability of Sites for Filling: There is a shortage of sites for disposal of clean fill and low level contamination material (road scrapings, water race spoil). Lease agreements are being established with a number of contractors/quarry operators where they will obtain consents for this purpose and manage filling to Council requirements. Further sites may be made available for this purpose over the next 10 years. It will be imperative for Council to have adequate inspection processes in place to control these activities and ensure the desired outcomes are achieved.

Forestry

Strategic Direction

The Council's involvement in Forestry has been primarily as a land management tool rather than as a commercial venture. Although this is not the principal aim of Council's involvement with this activity and there are other identified benefits, it is prudent for Council to consider long term implications and options.

The cash-flow scenario for the LTP indicates that there will be a forecast annual deficit for a number of years over the next 10 years. This is directly attributable to the age distribution of the tree crop with few areas identified for harvest during the planning period apart from year 10. This situation is partly a result of the early harvest of trees due to damage from the 2013 wind storm and the re-stocking programme that has followed from that.

The commercial return and other benefits are considered insufficient to warrant continued or additional investment in this activity. The Activity Management Plan assumes that Council will phase out its involvement in productive forestry activities as a means of land management in future. It may however still maintain forests for other recognised purposes, such as recreation and forest preservation (McHughs Forest Park).

Previous direction from Council has indicated a preference for withdrawal from forestry to be undertaken in the most expeditious way that minimises costs to Council (such as ETS obligations to pay carbon credits for deforestation). The deforested blocks have largely been replanted to avoid having to pay ETS liabilities for destocked land and once they reach nine years in age the carbon credits will be recognised. Ultimately this would see the blocks on sold (land and forest).

As most of the forests are situated on Crown reserves disposal will need to follow the revocation process under the Reserves Act which may take a period of time.

A withdrawal from forestry would involve land use assessment on a block by block basis to determine the best long term outcome for each site based on analysis of potential uses, identification of limitations and cost implications. It may be prudent for Council to reconsider disposal as the carbon credits held can be used to offset carbon production. This needs to be weighed against the cost of ownership.

Key Challenges

Forestry Management: The dispersed nature of the sites (many small sites) and the relatively low productivity on plains locations means that forestry is a marginal activity from an economic perspective and needs to provide other significant benefits to warrant continued investment. The objective is to provide minimum inputs to reduce costs but this does not lead to quality forestry operations.

Maintenance and Operations: Whether forested or not there will still be costs incurred for looking after the sites (until they can be sold, leased or converted to an alternative use). This includes noxious pest and weed control, rubbish removal, fencing repairs and roadside maintenance.

ETS Liabilities: Deforestation (land not replanted after 4 years from harvest) will incur carbon unit costs. If carbon unit liabilities are not paid then penalties for non-payment can be applied. Council has avoided these liabilities by re-stocking the land that was previously deforested as the cost of replanting was significantly less than current carbon unit costs. This strategy also potentially makes the blocks more saleable. ETS implications need to be considered with any future decision on harvesting and to replant or not.

Withdrawal from Forestry Activities: Withdrawal from forestry activities is not a straightforward process and Council will incur carbon unit costs if deforested land is not re-stocked with forest species or native plants that can attain forest cover. This presents a challenge in regard to the preferred option to withdraw from forestry activities. Therefore a replanting strategy was implemented to avoid/reduce carbon costs but with the notion of on-selling forested land once the reserve status has been removed and potentially retaining some sites that have a continued amenity or other purpose as afforested blocks. This strategy will take time to achieve with forests trees not recognised for carbon credits until 9 year of age

and needing to achieve a certain level of stocking. At this stage the forestry 10 year plan assumes a level of continued involvement over the 10 year planning period but has not incorporated any significant costs for carbon unit liabilities if harvesting occurred without re-stocking and anticipates some disposal of forest and land assets in the later years (subject to approval processes).

Land and Forest Disposal: It is proposed to follow the same reserve disposal process as with Gravel Reserves for forestry sites where this is applicable. This process is likely to take some years to complete given the various requirements under the Reserves Act and the DoC procedures. There are some sites (around 40 ha) that cannot be sold as they are on legal road, cemetery land or have other constraints. In these cases it is proposed to retain these in either forest or native species.

Township Reserves & Streetscapes

Strategic Direction

Provision, management and development of Township Reserves and Streetscapes are guided by the Open Spaces Strategy, Township Structure Plans and Outline Development Plans.

The Council provides township reserves to meet the recreation needs of town residents and to mitigate the density of housing in built-up areas by providing green open space. Streetscape areas mitigate the road environment and make the shopping precincts more pleasant for residents and more conducive to retail business. The township reserves and landscaped areas help to provide an attractive living environment that supports on-going growth.

The Council has adopted a minimum standard of 1.2 hectares per 1,000 population for neighbourhood and passive reserves and also aims for a distribution level that allows easy access for users (500 metre radius from residential properties). Council's objective is to continue to maintain these standards as the district grows. There are a few localities in the district that currently do not meet these standards and it is intended to address this issue over time via subdivision or acquisition programmes. Currently the overall provision is around 1.3 ha per 1,000 population which is very close to the target minimum standard and within the range recommended by NZRA (1.0-1.75 ha/1,000 popn.).

In going forward there needs to be a balance between the amount of reserve land taken through subdivision to maintain provision and distribution standards and the cost of looking after these reserves and the assets on them. To this end Council's Engineering Code of Practice Part 10 Reserves Streetscapes and Open Spaces provides clear standards on assets to be provided. A review of the Development Contributions Policy related to reserves has provided guidelines on what land and assets are acceptable and has included deterrents to accepting land that exceeds requirements.

Key Challenges

Changing Service Expectations: The change in some parts of the district from rural to urban has brought with it changing expectations in terms of levels of service. There is now an expectation that the quality of facilities provided will be comparable with those provided in a city environment. This has implications from both a capital and operational cost perspective. In response to this there is a modest programme of level of service enhancement works shown in the 10 year plan which includes some landscape enhancement projects and provision of drinking water fountains. The only significant project is the construction of Rolleston Town Square which is part of the overall works for the town centre development.

Growth Development Costs: Funding will be required to develop new reserves as they are acquired (excepting where full development is undertaken by sub-dividers). A capital development programme has been prepared based on expected timing for reserve acquisition. This will be funded from reserve development contributions and expected costs have been built into development contribution projections for each of the wards.

Maintenance costs: The township reserves and streetscapes are maintained under the Reserves Maintenance Contract with SICON Ltd which has recently been renegotiated. The agreed rates in the new contract are reflected in the financial programmes for the next 10 years. The same standards in terms of mowing and garden maintenance have been retained which has translated to additional costs. There may be an opportunity to review site maintenance grades as the new contract is bedded in with a view to reducing costs. Another key impact on costs relates to looking after the expanding tree resource to ensure tree health is maintained and public safety protected. Playground maintenance is also a significant cost area which increases with new playgrounds being developed and associated compliance costs.

Demand for New or Expanded Reserves: With the predicted population growth in the district there will be demand for additional reserves to service the new residential areas created. Planning input to new sub-divisions will be essential to ensure an appropriate network of reserves is provided to meet future demand. The objective of providing green open spaces for recreation and to offset the effects of urban development has cost implications for Council in terms of maintaining additional areas. Over the 10 year period it is estimated that costs for routine maintenance of Township Reserves and Streetscapes will increase from around $2,285,000 (current) to over $3,159,000 by 2030/31. This is a primarily a result of new reserves forecast to be vested from subdivision activity where there is expected to be over 20 hectares of additional neighbourhood reserve space added to the network over the 10 year period. This equates to a level of 1.27 ha/1,000 population based on population growth projections. It is anticipated that this will be largely covered by extra rate revenue derived from household growth.

Renewal Costs: An asset renewal profile has been developed for township reserve assets based on condition assessments and analysis of remaining economic lives. With the large number of assets created over the last 10 years there will be increasing costs associated with renewal work. This especially relates to playground equipment where increased renewal costs start to become evident in the later years of the 10 year programme. There may be alternatives to asset replacement that can be explored at the time of renewal such as work to extend lives or decommissioning of assets where they are no longer required. With the large number of playgrounds provided, as the general population ages, the requirements may diminish and playgrounds could be removed rather than renewed.

Customer satisfaction has remained at a high level with playgrounds which is attributed to new playgrounds being installed and others being upgraded over the last few years. Selwyn District Council also has a high level of playground provision (6.3 per 1,000 children) compared with other similar Local Authorities (median is 4.8 per 1,000 children).

8.8 Solid Waste Management

The Solid Waste activity is currently made up of the following key services:

- Kerbside Collection (including drop off points and facilities)
- Pines Resource Recovery Park (including comprehensive recycling and hazardous waste options)
- Composting operation
- Events and Education (including community recycling days, farm waste days, school and public talks, business assessments).

In developing this infrastructure strategy the following specific issues have been identified:

Solid Waste Management

Reducing waste to landfill – how can we help reduce residual waste?

The Waste Minimisation and Management Plan 2019 (WMMP) provides the direction and assesses the options for delivery of this activity.

The WMMP states

> *Selwyn District embraces the philosophy behind the Waste Hierarchy in every way that is economically and practically achievable, in order to maintain or improve the condition of air, land, water and the general environment for current and future generations.*

As well as public health and environmental concerns, it is noted that waste is a significant contributor to carbon emissions, and will become increasingly important as Council starts working towards zero carbon by 2050 under the Climate Change Response (Zero Carbon) Amendment Act.

Tonnages of waste have increased along with the population of the district. The rate of diverted material (all recycling and organic) from kerbside household waste has grown over ten years to a point where the quantity of diverted materials is similar to that of residual waste. The total waste quantity per capital has also progressively decreased over the last five years, while the quantity per household has remained steady.

Waste to landfill tonnes are currently predicted to rise slower than district growth. This is because recent trends show that diverted material streams such as recycling and in particular, organics offset some of the waste tonne growth that we would otherwise expect as population grows.

Key Projects to be delivered during the 2021-31 LTP are the remaining stages of the Reconnect Project approved during the 2018-28 LTP process, however with adjusted timing for delivery.
These remaining stages include the bulk of the construction of the buildings such as:

2021: Reuse Shop, Salvage Yard and Education Centre $2.735M
2023: Multi-purpose waste hub & site works $1.287M
2024: Micro Enterprise Units $787k

Every ten years the Resource recovery roading requires reseal, and there is allowance to replace the compactor.

8.9 Summary of Significant Infrastructure Issues

Along with the replacement of existing infrastructure; Council's priority relates to the rapid growth in the eastern portion of the district. Keeping pace with demand is the focus for core infrastructure, and a strategy led approach is key to ensure integrated programmes and developed and delivered.

Selwyn has consulted extensively with the community and developed a range of strategic documents to drive investment in creating the future residents desire. Master planning and structure planning are key to this. This infrastructure strategy discussed the implementation of these documents alongside the management of core infrastructure.

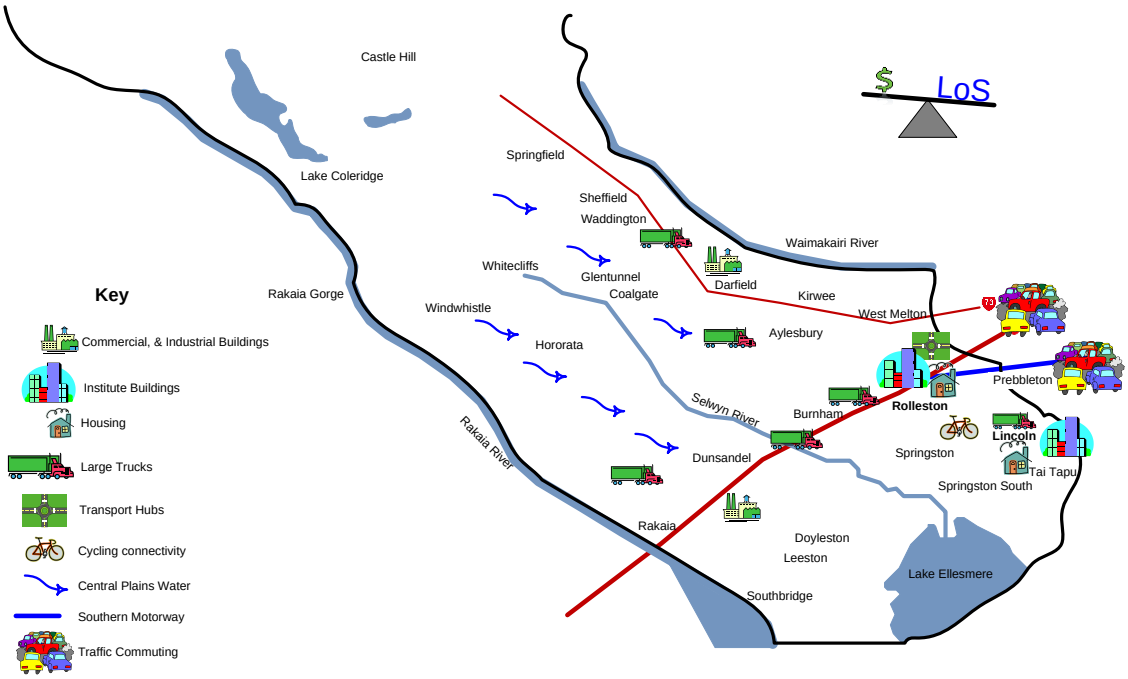
It is not Council's intention to revisit the proposals developed with the community, and refined for implementation through this strategy. Rather seeking timeframes and funding that is appropriate and affordable is key.

The structure and impacts of water reforms remains unclear at this stage. However Council remains focused on long term planning to meet the needs of the community for the long term. Planning and programmes are comprehensive to meet demand as well as levels of service improvements.

Traffic numbers continue to grow with residential and business activity and is affecting the performance of the transportation networks. Comprehensive analysis supports sound lifecycle decision making, especially when national funding is limited.

Addressing the growth challenge is essential. Council is rightly focussed on this. It should be noted that in responding to this challenge, Council is considering the wider wellbeing of the community. Safety, recreation and enjoying being a Selwyn resident are all part of the mix. Council has chosen to include Community facilities in this Infrastructure Strategy given the important contribution to wellbeing and the scale of the activity. While much of the discussion is focussed on the next ten years, further planning is in progress.

The issues are summarised in the schematic below.



8.10 Other Scenarios Considered

The key issue Council is addressing is growth. The rate of growth and if growth will continue are central to all decision making and strategy formulation.

Councils approach to this challenge is three-fold:

1. Use a strategy driven approach to ascertain the community's priorities and the future sought in the future
2. Developing sound projections
3. respond with scalable interventions.

Projections used have been independently reviewed and are regularly tested against growth to date. The model has proved to be robust and appropriate for planning.

Where possible a scalable approach is being used to address the variability in growth. This also limits the financial risk to the community as Council is not 'getting ahead of itself' with construction projects. The transportation programme is comprehensive and can be adjusted over time as required. Traffic models are run in combination with NZTA and Christchurch City Council to tract demand and trends.

The combination of separate wastewater schemes into the Eastern Selwyn Sewerage Scheme provides flexibility and the plant has a modular design, so can be expanded in line with growth.

The rate of growth is driving a demand for community facilities that is step change from that typical of smaller communities. Again, confidence in understand population growth and demographic profiles is key. Infrastructure programmes are staggered over the next thirty years.

Changes to the programme are to be expected. However, Council has undertaken extensive consultation to understand the short term needs and the long terms desires of its residents. There are strategies in place across the portfolio of assets charting a clear direction ahead. The infrastructure strategy enables the development to be altered by speed and direction as the priorities of the community, visitors and central government.

The strategies directing the long term planning processes are discussed below. Changes to scenarios considered would need to be realigned with these documents.

Selwyn 2031 (2014)

The purpose of Selwyn 2031 is to provide an overarching strategic framework for achieving sustainable growth across the district to 2031. The Strategy emphasises the importance of adopting and implementing a strategic approach to managing urban growth as a means of strengthening the district's self-sufficiency and to ensure that it continues to be a great place to live, work and play. In doing so, the Strategy seeks to provide higher quality living environments; innovative business opportunities; maintain the district's iconic rural character; explore opportunities to enhance our social and cultural wellbeing and better manage our natural resources.

Selwyn 2031 identifies the following five high-level Directions to guide Council's future decision-making:

- *A More Sustainable Urban Growth Pattern;*
- *A Prosperous Community;*
- *A Great Place to Live;*
- *A Strong and Resilient Community;*
- *Sustainably Managing our Rural and Natural Resources*

Lincoln Structure Plan (2008)

The purpose of the Lincoln Structure Plan is to outline an urban design vision for the future development of Lincoln Township and to provide a strategic framework to guide the development process.

The Lincoln Structure Plan has been prepared in order to facilitate an integrated approach to achieving the sustainable management of the natural and physical resources of the Lincoln Study Area. This includes

- *Development of an urban design strategy for the area;*
- *Identification of key natural resources and community assets within and related to the area;*
- *Establishing an integrated land use pattern that responds to the characteristics of the area;*
- *Identification of infrastructure requirements to facilitate urban development.*

The Lincoln Structure Plan creates a framework to guide development and will be used as a basis for:

- *Future changes to the District Plan;*
- *Developing an infrastructure programme;*
- *Determining the Long Term Council Community Plan*

Prebbleton Structure Plan (2010)

The purpose of this document is to provide a framework for coordinating development and other changes in Prebbleton in order to achieve a high standard of town planning and urban design. This report and accompanying Structure Plan map (Map 6, Appendix 3) provide an overview of the existing form and content of the township, consider development constraints and opportunities, and community aspirations.

Rolleston Structure Plan (2009)

The Rolleston Structure Plan has been initiated as part of delivering the Greater Christchurch Urban Development Strategy. The Plan seeks to manage the rapid growth that has and will likely occur in Rolleston, which could be a town as large as 50,000 by 2075.

The three objectives of the Plan are

- *A Sustainable Rolleston*
- *A Well Designed Rolleston*
- *A Realistic and Achievable Rolleston*

To achieve the vision and these objectives, the Structure Plan proposes the following major developments:

1. *A refocused Town Centre:*
2. *A New Recreation Precinct:*
3. *A New 100 hectare Regional/District Park:*
4. *A mix of housing in Rolleston:*

Implementation of the Structure Plan will be crucial in achieving the vision and major developments outlined above. The key objectives are considered within the document with a checklist and implementation tables at each stage along with cost estimates where they are known and any affordability issues that may have been identified.

Rural Residential Strategy (2014)

The primary purpose of the RRS14 is to provide guidance and policy direction on how best to manage rural residential development within the eastern portion of Selwyn district that is generally recognised as the commuter belt with Christchurch City. This includes establishing the optimal form, function and character of rural residential development and where it is best located.

Ellesmere and Malvern Area Plans

The Ellesmere Area Plan and Malvern Area Plan were adopted by Selwyn District Council in September 2016. The purpose of the plans is to provide high-level planning direction to guide the growth and sustainable management of each township in the Ellesmere and Malvern areas through to the year 2031.

The plans identify initiatives to assist in the delivery of the Selwyn 2031: District Development Strategy (Selwyn 2031) vision, which is:

"To grow and consolidate Selwyn District as one of the most liveable, attractive and prosperous places in New Zealand for residents, businesses and visitors.

Other scenarios that affect the decisions integral to this Infrastructure Strategy include:

Water quality, changes to source water and drinking water requirements – a risk based approach has been applied to introduce further treatment where it may be required in the future.

Climate change – the impacts on water supplies have been modelled and learnings applied to other services. The long term options for some communities affected by sea level rise will be considered alongside their needs for infrastructure investment. More severe weather should be expected, and is being factored into infrastructure management and Council operations.

There is a positive relationship with Christchurch, in that both communities affect each other. The UDS framework provides a framework for joint planning, and there is a no surprises approach across the UDS partners. Joint planning remains vital to effective and efficient service delivery to the community.

9.0 FINANCIAL ESTIMATES

The Local Government Act 2002 Section 101B – Infrastructure Strategy states:

(4) The infrastructure strategy must outline the most likely scenario for the management of the local authority's infrastructure assets over the period of the strategy and, in that context, must—

"(a) show indicative estimates of the projected capital and operating expenditure associated with the management of those assets—

"(i) in each of the first 10 years covered by the strategy; and

"(ii) in each subsequent period of 5 years covered by the strategy

9.1 Total Expenditure

The projected capital expenditure associated with the significant infrastructure assets are graphically represented below:

Notes

1. The graphs include all projected expenditure and is not limited to the significant projects discussed earlier.
2. Capital project estimates are inflated
3. The expenditure indicated in the five year blocks from 2027/28 to 2047/48 are averages for the 5 year period.

Figure 9.1: Projected Capital Expenditure- Infrastructure Assets

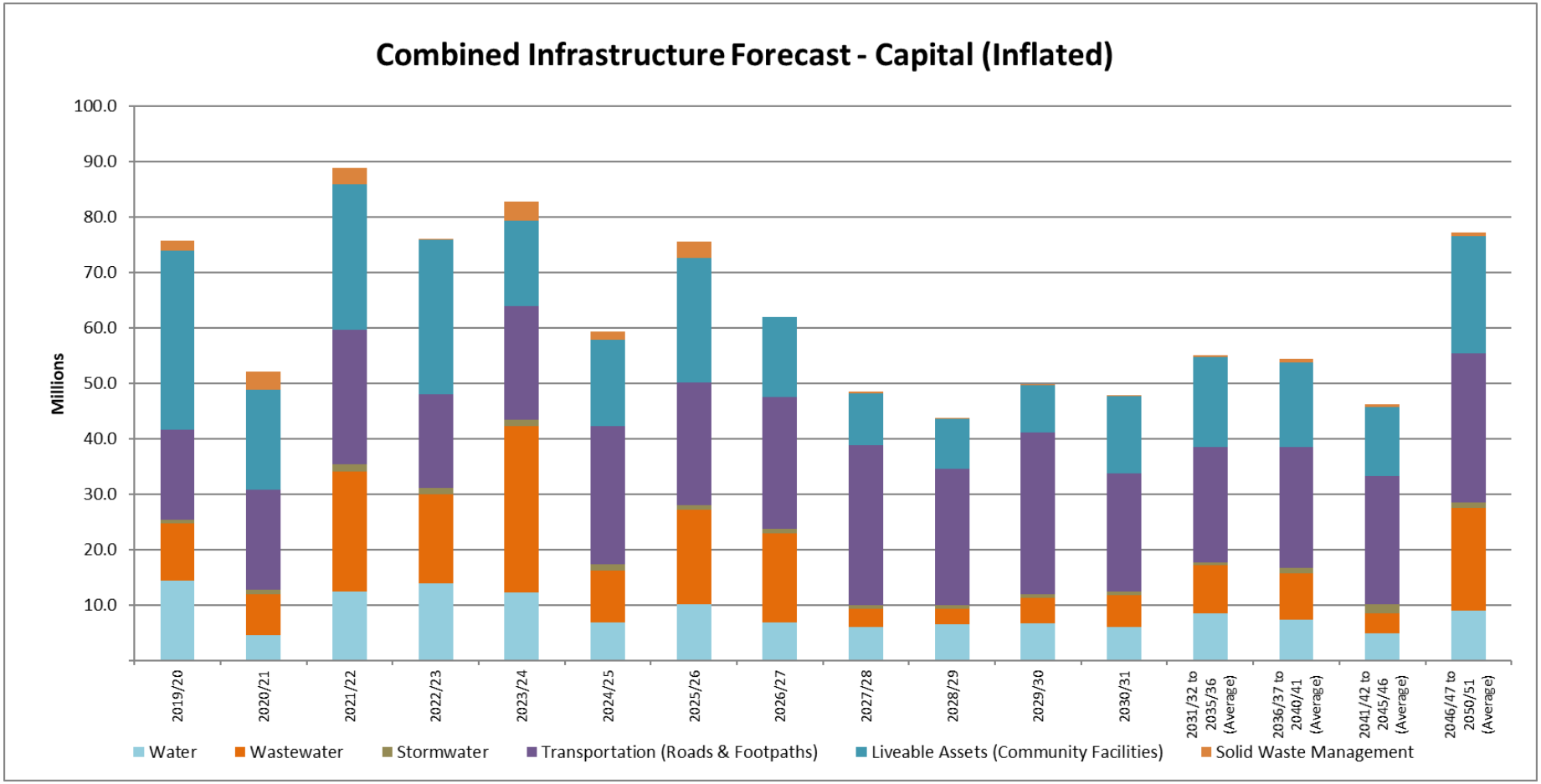
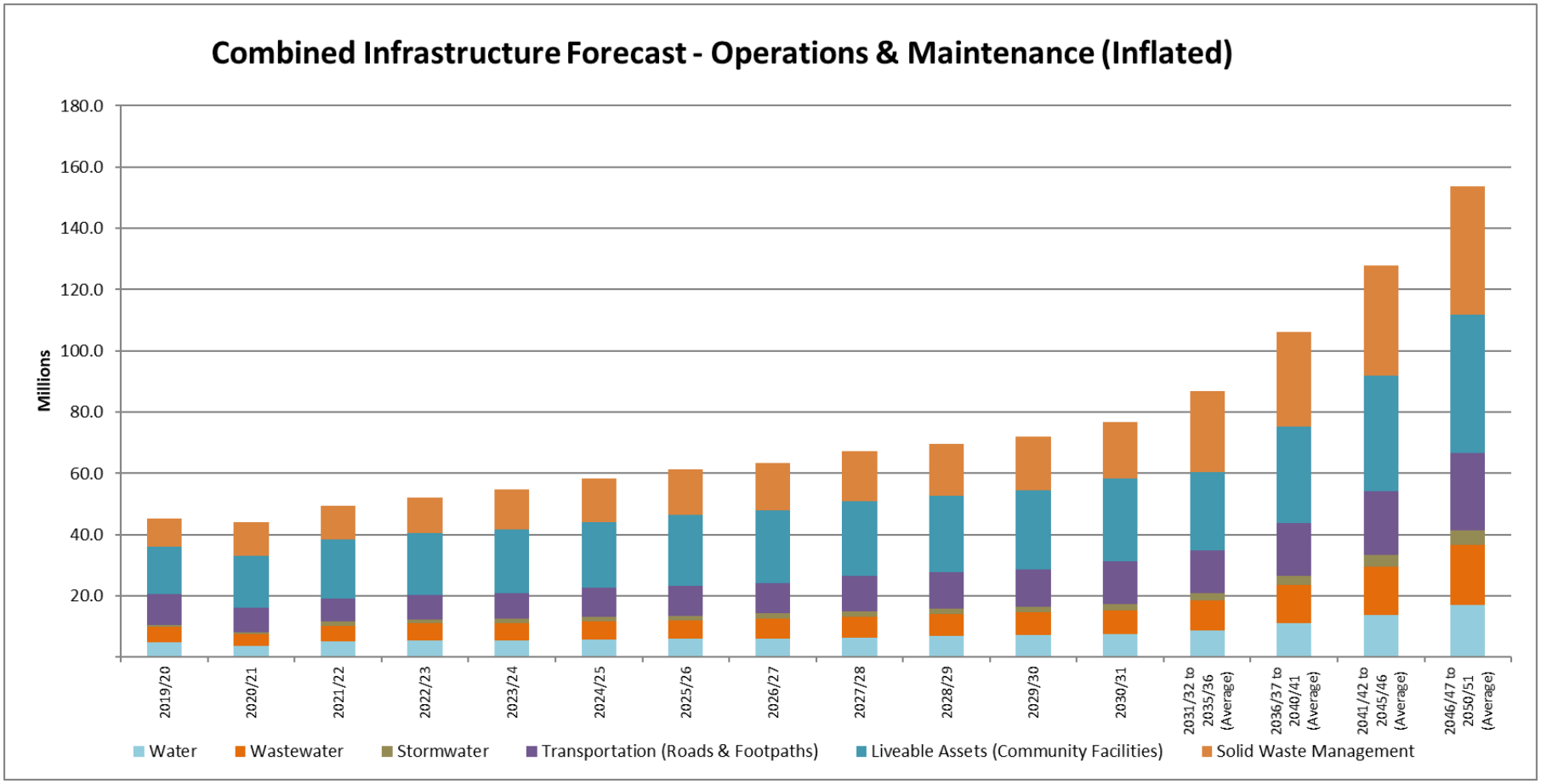


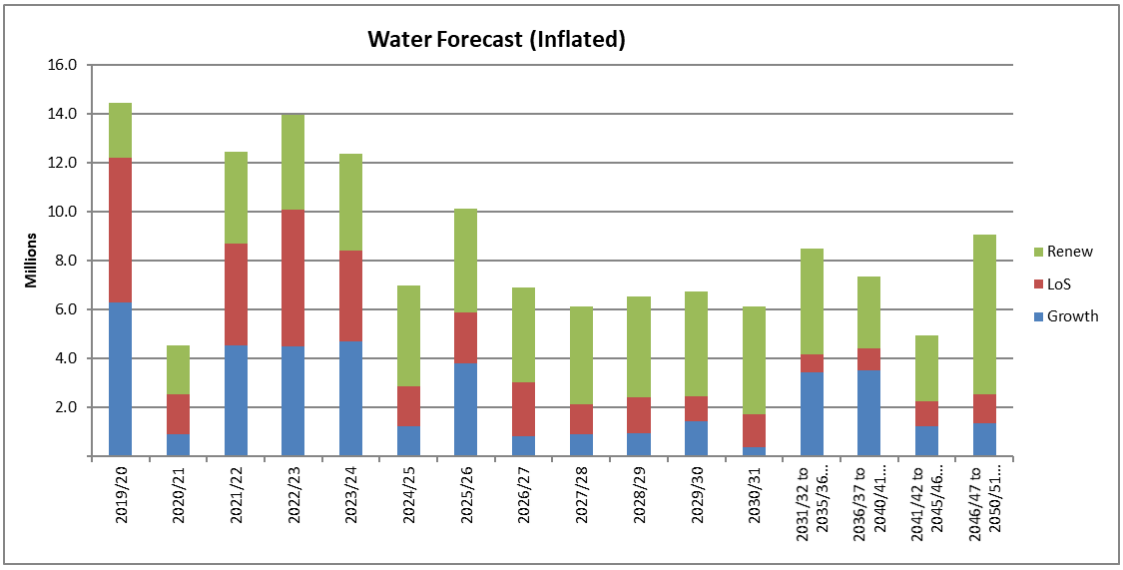
Figure 9.2: Projected Operational Expenditure –Infrastructure Assets



9.2 Water

The projected capital expenditure associated with the water infrastructure assets are graphically represented below:

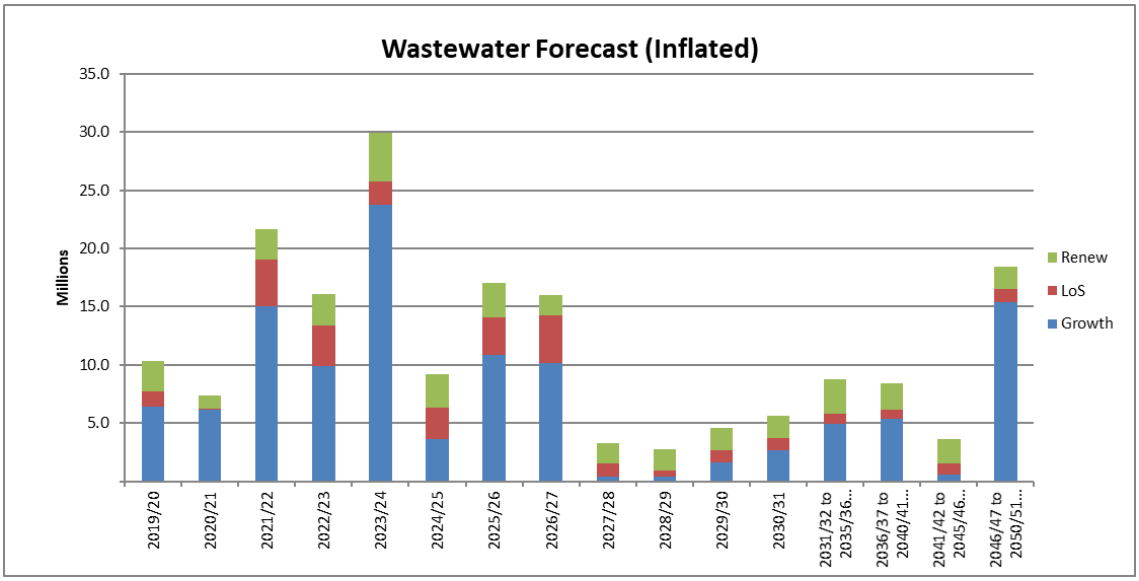
Figure 9.3: Projected Capital Expenditure – Water



9.3 Sewerage

The projected capital expenditure associated with the sewerage infrastructure assets are graphically represented below:

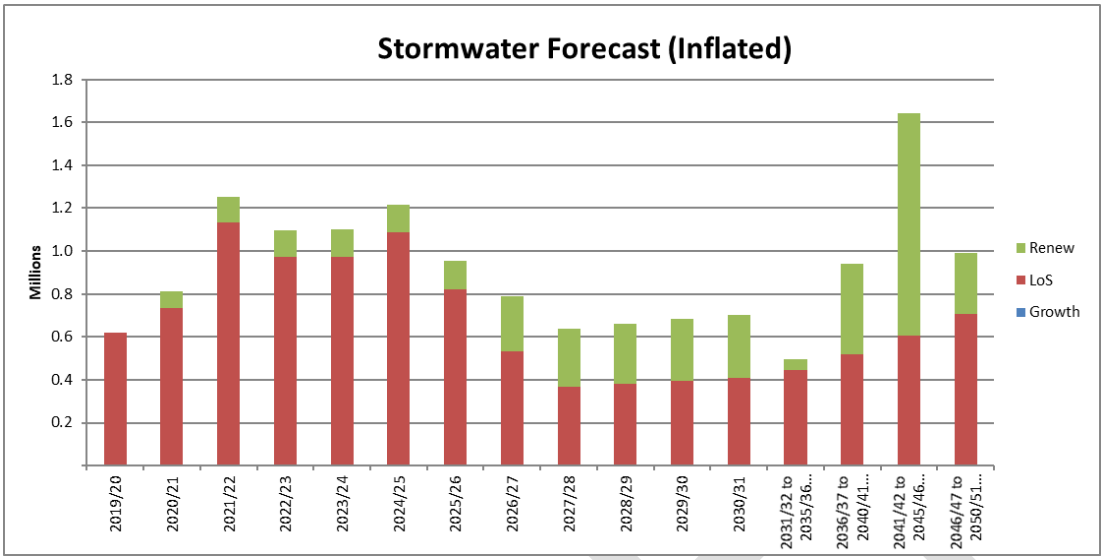
Figure 9.4: Projected Capital Expenditure – Sewerage



9.4 Stormwater

The projected capital expenditure associated with the stormwater infrastructure assets are graphically represented below:

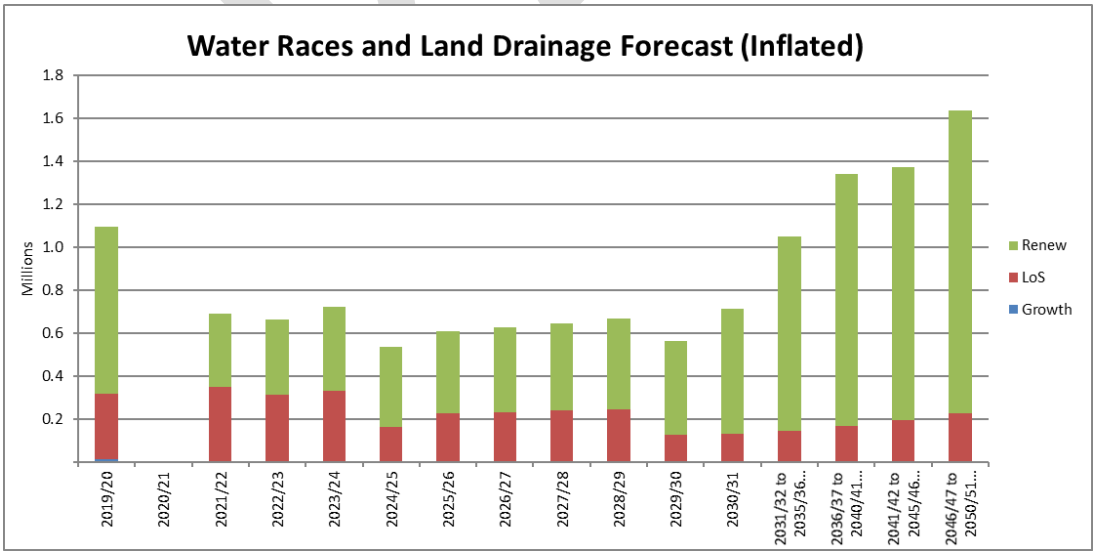
Figure 9.5: Projected Capital Expenditure – Stormwater



9.5 Water Races and Land Drainage

The projected capital expenditure associated with the water race infrastructure assets are graphically represented below: There are no significant project proposed for land drainage

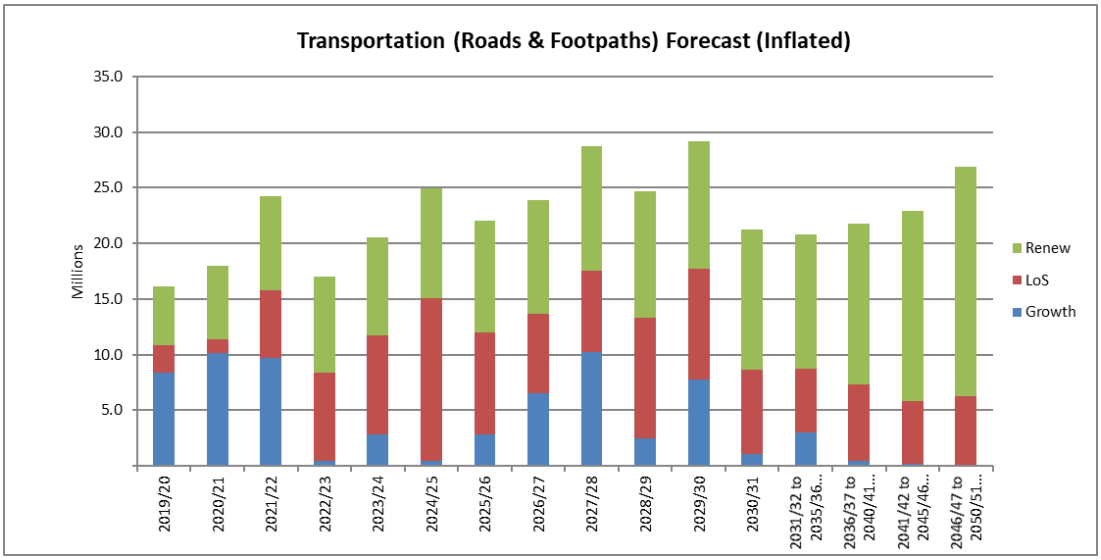
Figure 9.6: Projected Capital Expenditure – Water Races and Land Drainage



9.6 Transportation (Roads and Footpaths)

The projected capital expenditure associated with the roads and footpaths infrastructure assets are graphically represented below:

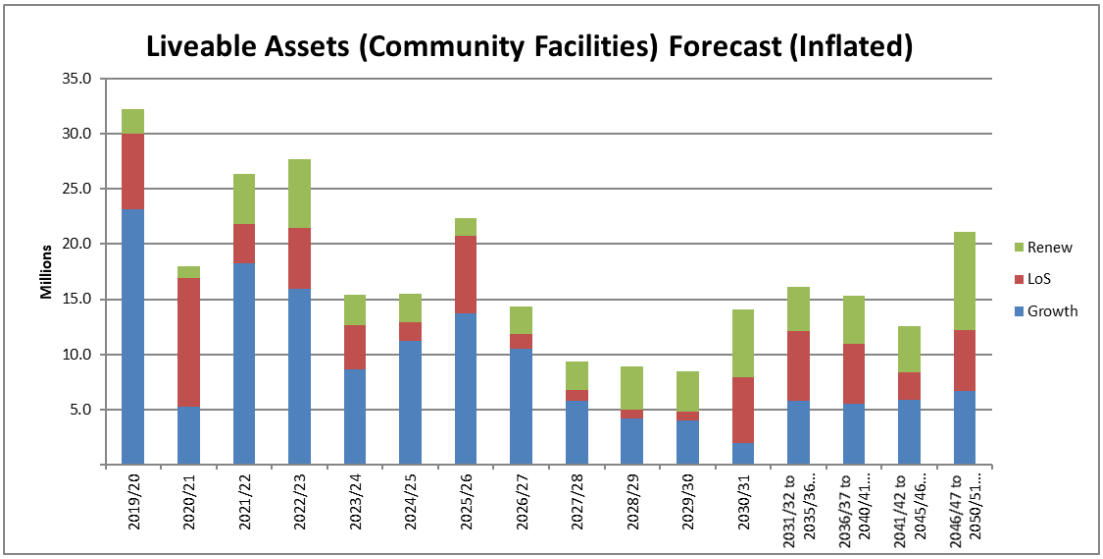
Figure 9.7: Projected Capital Expenditure – Transportation (Roads and Footpaths)



9.7 Liveability Assets (Community Facilities)

The projected capital expenditure associated with community facilities infrastructure assets are graphically represented below:

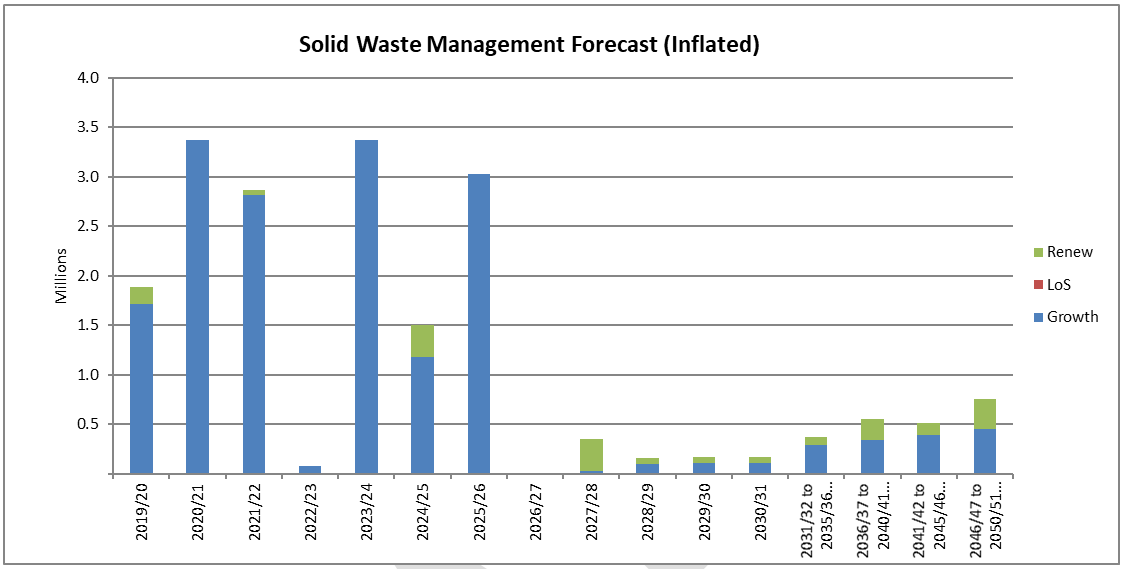
Figure 9.8: Projected Capital Expenditure – Community Facilities



9.8 Solid Waste Management

The projected capital expenditure associated with Solid Waste infrastructure assets are graphically represented below:

Figure 9.9: Projected Capital Expenditure – Solid Waste Management



9.9 Financial Impacts of the Infrastructure Strategy

While Council is in a sound financial position, it is fully aware of the scale of expenditure discussed in this infrastructure strategy. The proposals discussed in this strategy benefit both current and future residents and ratepayers, so a balance between 'who pays' should be sought. This also needs to be considered in terms of new developments, so that there is a reasonable share been existing and new residents.

As the main urban areas of the district's townships expand, they provide a greater range of services to the district's residents. Both Rolleston and Lincoln in particular are becoming less reliant on Christchurch and recognised as centres with their own facilities. The timing for the town centre projects is crucial to consolidate this transition.

Selwyn's' strategy driven approach is key to a four wellbeings approach to a growing district with a sustainable future. This includes the whole district not just the pressure points.

Growth can be addressed with the right infrastructure at the right time. Robust planning for solid waste, transportation and water services is in place to ensure these services are fit for purpose. An expansion in community facilities will support activity and community vitality into the future.

As the asset portfolio increases, the cost of operations and maintenance increases. Decisions on capital works shall include energy efficient, sustainable designs. Incremental costs at construction time will be weighed up with the whole of life costs for assets delivering service to the community

Over the long term the renewal cost and the depreciation charge for the Council's infrastructure assets (roads, water and waste water systems) should be similar. But in any one year they can be very different – depreciation is a regular annual operating expense and the corresponding renewal is an irregular capital cost. Because many of the Council's assets are relatively new, and have been recently paid for by ratepayers through rates and development contributions Council has adopted a mixed model of depreciation funding. This is discussed in the Financial Strategy.

This infrastructure strategy focusses on long term service provision at an appropriate and sustainable level. The underpinning levels of service are largely similar to current levels, and those described in the long term plan. Some variation should be expected over time, as new assets are established expectations may be exceeded, while at other times assets will be constructed 'just in time' to meet demand. Driving greater efficiencies in the future is vital to ensure costs are managed and emissions reductions are targeted.

There are risks evident in this strategy, the greatest being a change in the rate of population growth. Many of the infrastructure proposals discussed are modular and can be adjusted to suit the demand or timing as appropriate. The Eastern Selwyn Sewerage Scheme as an excellent example of this approach, ensuring that demand and performance are tracked, so that capital works are constructed at the right time reducing the risk of over-capitalising.

Council's prudent financial management means that there are resources available to implement the proposals discussed in this strategy. The investment required reflects the community's confidence in Selwyn as a great place to live, work and play.